

Evaluation of the anti-diabetic activity of some Common Herbs and Spices: providing new insights with Inverse Virtual Screening

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Table S1. Docking scores for known and experimental drugs

| Compound name | Docking score |
|---|---------------|
| <u>Aldose reductase</u> | |
| lidorestat | -11.4 |
| Crystallized ligand | -11.3 |
| minalrestat | -11.1 |
| zenarestat | -10.9 |
| ponalrestat | -10.6 |
| ranirestat | -10.6 |
| zopolrestat | -10.6 |
| salfredin B11 | -9.9 |
| Imirestat | -9.8 |
| Alrestatin | -9 |
| Fidarestat | -8.9 |
| Epalrestat | -8.7 |
| sorbinil | -8.4 |
| tolrestat | -8.1 |
| <u>Pancreatic alpha-amylase</u> | |
| Gedunin | -9.7 |
| Monbretin_A | -9.3 |
| Monbretin_C | -9.2 |
| Meliacinolin | -9.1 |
| Azadiradione | -8.5 |
| Fisetin | -8 |
| AcarviostatinI03 | -8 |
| Crystallized ligand - myricetin | -7.8 |
| Acarbose | -7.5 |
| Caulerpenyne | -7.1 |
| Acarviosine_glucose | -7 |
| AcarviostatinI01 | -6.7 |
| Ethyl-caffeate | -6.3 |
| Miglitol | -5.3 |
| Metformin | -4.5 |
| <u>Dipeptidyl peptidase 4</u> | |
| Crystallized ligand | -10.5 |
| Sitagliptin | -9.2 |
| Linagliptin | -8.9 |
| Gosogliptin | -8.9 |
| Berberine | -8.5 |
| Omarigliptin | -8.4 |
| Saxagliptin | -8.3 |
| Anagliptin | -8.2 |
| Vildagliptin | -7.9 |
| Alogliptin | -7.7 |
| Trelagliptin | -7.2 |
| <u>Fructose-1,6-bisphosphatase 1</u> | |
| 1fta | -6.4 |
| 4mjo | -6.3 |

| | |
|---|--------------|
| 2y5k | -6.1 |
| 2fix | -5.8 |
| 2y5l | -5.8 |
| Crystallized ligand | -5.3 |
| 3kc1 | -5.3 |
| MDL-29951 | -5.2 |
| Managlinat dialanetil | -4.9 |
| MB07803 | -4.9 |
| 3kc0 | -4.8 |
| 3kbz | -4.7 |
| 2vt5 | -4.3 |
| | |
| <u>Free fatty acid receptor 1</u> | |
| AM1638 | -11.3 |
| MR1704 | -11.1 |
| LY-2881835 | -11 |
| AMG837 | -10.7 |
| TUG-770 | -10.4 |
| 5tzt | -10.3 |
| GW9508 | -10.1 |
| Fasiglifam | -10 |
| P-1736 | -10 |
| Crystallized ligand - TAK-875 | -9.8 |
| PBI-4050 | -8.7 |
| GW1100 | -7.6 |
| | |
| <u>Glucokinase</u> | |
| Crystallized ligand | -10.6 |
| Piragliatin | -10.4 |
| 4no7 | -10.2 |
| PF04937319 | -9.7 |
| LY2599506 | -9.6 |
| PF0499153 | -9.3 |
| AM2394 | -9.3 |
| 5v4w | -9.2 |
| Ro-28-1675 | -9.1 |
| AMG151 | -8.9 |
| AMG3969 | -8.8 |
| LY2608204 | -8.3 |
| AZD1656 | -8.3 |
| | |
| <u>11B-Hydroxysteroid dehydrogenase type 1</u> | |
| Enoxolone | -11 |
| ABT-384 | -10.8 |
| Carbenoxolone | -10.8 |
| EGCG | -9.8 |
| RO5093151 | -9.8 |
| Acetoxolone | -9.7 |
| 11-beta-hydroxyprogesterone | -9.5 |
| INCB13739 | -9.3 |
| 11-beta-hydroxyandrostenedione | -9.1 |

| | |
|-----------------------------|-------------|
| Curcumin | -8.7 |
| 11-beta-hydroxytestosterone | -8.6 |
| 18-alpha-glycyrrhizic acid | -8.4 |
| Cortisol | -8.3 |
| Crystallized ligand | -8.3 |

Insulin receptor

| | |
|----------------------------|-------------|
| linsitinib | -9.7 |
| GSK1904529A | -9.4 |
| 3ekk | -9.4 |
| 5e1s | -8.7 |
| Crystallized ligand | -8.7 |
| Ceritinib | -8.6 |
| NVP-AEW541 | -8.5 |
| BMS-536924 | -8.4 |
| 4IBM | -8.4 |
| GSK1838705A | -8.2 |
| BMS-754807 | -7.7 |
| AGL-2263 | -7.4 |

Intestinal maltase-glucoamylase

| | |
|--------------------------------------|-------------|
| Cyanidin | -8.7 |
| Epigallocatechin gallate | -8.4 |
| Meliacinolin | -8.0 |
| terretonin | -7.9 |
| territrem_A | -7.9 |
| terretonin_A | -7.7 |
| acarbose | -6.8 |
| nojirimycin | -6 |
| de-O-sulfonated-kotalanol | -5.9 |
| kotalanol | -5.9 |
| Crystallized ligand – NR4-8II | -5.9 |
| neoponkoranol | -5.8 |
| 1-deoxynojirimycin (duvoglustat) | -5.4 |
| ponkoranol | -5.4 |
| voglibose | -5.1 |
| salacinol | -5.0 |
| BJ2661 | -4.9 |
| casuarine | -4.7 |
| miglitol | -4.5 |
| valiolamine | -4.4 |

Liver receptor homolog-1

| | |
|------------------------------|------|
| ML179 | -8.8 |
| ML180 | -8.2 |
| Cpd3 | -8 |
| RJW100 alcohol derivative 2N | -7.8 |
| RJW100 | -7.7 |
| GSK8470 | -7.6 |
| RJW100 alcohol derivative 6N | -7.4 |
| RJW100 alcohol derivative 5N | -7 |

| | |
|--|--------------|
| Crystallized ligand | -6.5 |
| DLPC | -5.6 |
| | |
| <u>Pyruvate dehydrogenase kinase 1</u> | |
| 5m4p | -9.4 |
| 4v25 | -9.3 |
| 5j6a | -8.7 |
| Crystallized ligand | -7.8 |
| 5j71 | -7.7 |
| 4mpe | -7.5 |
| 4mpn | -7.5 |
| AZD-7545 | -7.4 |
| CPI-613 | -6.8 |
| 5m4k | -6.7 |
| | |
| <u>Peroxisome proliferator-activated receptor alpha</u> | |
| CP775146 | -8.6 |
| Lobeglitazone | -8.5 |
| Crystallized ligand | -8.3 |
| GW6471 | -8.1 |
| GW7647 | -7.9 |
| Bezafibrate | -7.7 |
| Fenofibrate | -7.7 |
| Pirinixic acid | -7.5 |
| MK886 | -7.0 |
| Elafibranor | -6.4 |
| Oleyethanolamide | -6.2 |
| | |
| <u>Peroxisome proliferator-activated receptor delta</u> | |
| Telmisartan | -11.8 |
| Crystallized ligand | -11.3 |
| Sodelglitazar | -10 |
| GW0742 | -9.7 |
| GW501506 | -9.4 |
| GSK3787 | -9.2 |
| GSK-0660 | -8.7 |
| MBX-8025 | -8.6 |
| Indeglitazar | -8.5 |
| GFT-505 | -8.4 |
| L-165041 | -7.0 |
| | |
| <u>Peroxisome proliferator-activated receptor gamma</u> | |
| Farglitazar | -10.9 |
| Muraglitazar | -10.8 |
| Balaglitazone | -10.5 |
| Imiglitazar | -10.5 |
| Crystallized ligand | -10 |
| FK-614 | -9.5 |
| Pioglitazone | -9.4 |
| RWJ-348260 | -8.9 |
| Rosiglitazone | -8.8 |

| | |
|---|--------------|
| Ciglitazone | -8.8 |
| Metaglidasen | -8.5 |
| <u>Protein tyrosine phosphatase N9</u> | |
| Chebulinic acid | -9 |
| Crystallized ligand | -7.7 |
| 4ge5 | -7.4 |
| 4ge2 | -7.1 |
| <u>Liver glycogen phosphorylase</u> | |
| 3dd1 | -9.7 |
| Crystallized ligand | -9.6 |
| 3ddw | -9.2 |
| 3-O-acyl oleanolic acid derivative 4 | -8.8 |
| Oleanolic acid | -8.1 |
| CP-91149 | -8 |
| 3ceh | -7.7 |
| 2ati | -7.6 |
| N-Acetyl- β -D-glucopyranosylamine derivative 10 | -7.6 |
| N-Acyl-N'- β -D-glucopyranosyl urea derivative 12 | -7.4 |
| N- β -D-Glucopyranosyl monoamide of dicarboxylic acid derivative 2 | -6.7 |
| β -D-Glucopyranosyl Nucleosides derivative 2 | -6.6 |
| <u>Retinol binding protein 4</u> | |
| Tretinoin | -9 |
| 4psq | -8.6 |
| Crystallized ligand | -7.9 |
| 2-((3aR,5r,6aS)-5-(2-(trifluoromethyl)phenyl)octahydrocyclopenta[c]pyrrole-2-carboxamido)benzoic acid | -6.7 |
| A1120 | -6.6 |
| 4o9s | -6.5 |
| BPN-14136 | -6.4 |
| <u>Retinoic X receptor alpha</u> | |
| Bexarotene | -13 |
| Crystallized ligand | -10.6 |
| 5tbp | -10.2 |
| CD3254 | -10.1 |
| PA 451 | -9.4 |
| UVI 3003 | -9.4 |
| 4zsh | -8.9 |
| Magnolol | -8.7 |
| HX 531 | -8.5 |
| AGN34 | -8.5 |
| Danthron | -7.8 |

Table S2. Protein targets and source plants of potential bioactive compounds found in herbs and spices

| Compound | Enzyme | Source plants |
|---|---|---|
| (-)-illicinone A | RBP4 | Star anise |
| (+)-aromadendrene | NR5A2; RBP4 | Allspice; bay leaves; cardamom; ginger; oregano; paprika; sage; thyme |
| (1R,2R)-1'-(4-hydroxyphenyl)propane-1,2-diol-2-O-B-D-glucopyranoside | MGAM | Aniseed |
| (1R,2R)-Guaiacyl-glycerol-3'-O-B-D-glucopyranoside | MGAM | Aniseed |
| (1R,5R,6S,7S,9S,10S,11R)-1,9-dihydroxyeudesm-3-ene-12,6-olide-9-O-B-D-glucopyranoside | AMY2A | Cumin |
| (1S,2S)-1'-(4-hydroxyphenyl)propane-1,2-diol-2-O-B-D-glucopyranoside | MGAM | Aniseed |
| (1S,2S)-anthole-glycol-2-O-B-D-glucopyranoside | MGAM | Aniseed |
| (2E)-piperamide-C5:1 | NR5A2; RBP4 | Black pepper |
| (2E,4E,8E)-piperamide-C9:3 | AKR1B1; MGAM; NR5A2; PPARA; RBP4; RXRA | Black pepper |
| (2E,6E)-piperamide-C7:2 | AKR1B1; NR5A2; PPARA; RBP4 | Black pepper |
| (2E,8E)-piperamide-C9:2 | AKR1B1; NR5A2; RBP4; RXRA | Black pepper |
| (2-hydroxy-3-methoxy-5-allyl)phenyl-B-D-(6-O-E-sinapoyl)glucopyranoside | MGAM | Allspice |
| (2R,3R)-3,4',7-trihydroxy-3'prenyl-flavanone | AMY2A; DPP4; MGAM; NR5A2; PPARA; PTPN9; RBP4 | Liquorice |
| (3-(cyclopent-2-enyl)-2-methylprop-1-ene-1,1-diyl)dibenzene | MAGAM; NAR5A2; RBP4 | Basil |
| (3-(phenylsulfinylmethyl)cyclopropane-1,2-diyl)dibenzene | AKR1B1; DPP4; MGAM; NR5A2; PPARA; PPARA; RBP4 | Basil |
| (3b,5a,8a,22E) 5,8-epidioxy-ergosta-6,22-dien-3-ol | AMY2A; GCK; HSD11B1; MGAM; NR5A2; PPARA | Fennel |

| | | |
|---|------------------------------|--|
| (3R)-2',3',7-trihydroxy-4'-methoxyisoflavan | AMY2A; MGAM; NR5A2; RBP4 | Liquorice |
| (3R)-vestitol | MGAM; RBP4 | Liquorice |
| (4S)-p-menth-1-ene-7,8-diol 8-O-b -D-glucopyranoside | RBP4 | Caraway |
| (4S,5S)-germacrone-4,5-epoxide | RBP4 | Turmeric |
| (6E)-piperamide-C7:1 | AKR1B1; MGAM; RBP4 | Black pepper |
| (6R)-[(1R)-1,5-dimethylhex-4-enyl]-3-methylcyclohex-2-en-1-one | RBP4 | Turmeric |
| (6S)-2-methyl-6-[(1R,5S)-(4-methene-5-hydroxyl-2-cyclohexen)-2-hepten-4-one | RBP4 | Turmeric |
| (7H)-6,9a-methano-4H-cyclopenta[9,10]cyclopropa[5,6]cyclodeca[1] | NR5A2 | Ginger |
| (7S)-8'-(4'-hydroxy-3'-methoxyphenyl)-7-hydroxypropyl)benzene-2,4-diol | RBP4 | Nutmeg |
| (7S)-8'-(benzo[3',4']dioxol-1'-yl)-7-hydroxypropyl)benzene-2,4-diol | RMGAM; NR5A2; PPAPA; RBP4 | Nutmeg |
| (8R,8S)-7-(4-hydroxy-3-methoxyphenyl)-8'-methylbutan-8-yl)-3'-methoxybenzene-4',5'-diol | RBP4 | Nutmeg |
| (E)-caryophyllene | RBP4 | Allspice; basil; bay leaves; caraway; clove; dill; ginger; lemongrass; marjoram; paprika; rosemary; sage; thyme; turmeric; yarrow |
| (E)-3'-hydroxy-4'-(1"-hydroxyethyl)-phenyl-4-methoxycinnamate | RBP4 | Basil |
| (E)-a-atlantone | RBP4 | Dill; turmeric |
| (E)-b-Ionone | RBP4 | Basil; lemongrass; paprika; saffron |
| (E)-g-atlantone | RBP4 | Turmeric |
| (E)-sesquisabinene hydrate | RBP4 | Turmeric |
| (E,E)-a-farnesene | RBP4 | Clove; ginger; lemongrass; oregano; sage; turmeric |
| (E,E,E)-3,7,11,15-tetramethylhexadeca-1,3,6,10,14-pentaene | RBP4 | Turmeric |
| (R)-butyl-rosmarinate | MGAM; PPARA | Oregano |
| (Z)-a-atlantone | RBP4 | Turmeric |
| (Z)-a-trans-bergamotol acetate | RBP4 | Lemon balm |
| (Z)-g-atlantone | RBP4 | Turmeric |
| 1-(2',4'-dihydroxyphenyl)-2-hydroxy-3-(4"-hydroxyphenyl)-1-propanone | RBP4; MGAM; PPARA | Liquorice |
| 1-(3-cyclopentylpropyl)-2,4-dimethy-benzene | RBP4 | Turmeric |

| | | |
|--|---|----------------------|
| 1-(4'-hydroxy-3',5'-dimethoxyphenyl)-7-(4'-hydroxy-3'-methoxyphenyl)-4-hepten-3-one | MGAM; PPARA | Ginger |
| 1-(4-hydroxy-3-methoxyphenyl)-2,4-dehydro-6-decanone | MGAM | Ginger |
| 1-(4-hydroxy-3-methoxyphenyl)-5-(4-hydroxyphenyl)-1, 4-pentadiene-3-one | MGAM | Turmeric |
| 1-(4-hydroxy-3-methoxyphenyl)-7-(3, 4-dihydroxyphenyl)-1, 6-heptadiene-3, 5-dione | AKR1B1; AMY2A; MGAM; PPARA; RBP4 | Turmeric |
| 1-(4'-hydroxy-3'-methoxyphenyl)-7-dodecen-3-one | RBP4 | Ginger |
| 1-(4-hydroxyphenyl)-7-(3, 4-dihydroxyphenyl)-1, 6-heptadiene-3, 5-dione | AKR1B1; AMY2A; MGAM; PPARA; RBP4 | Turmeric |
| 1-(4'-methoxyphenyl)-(1R,2R)-propan-1-ol-2-O-D-glucopyranoside | RBP4 | Star anise |
| 1-(4'methoxyphenyl)-(1S,2R)-propan-1-ol-2-O-D-glucopyranoside | RBP4 | Star anise |
| 1-(4'-methoxyphenyl)-(1S,2S)-propan-1-ol-2-O-D-glucopyranoside | RBP4 | Star anise |
| 1-(9-hydroxy-4-methylethyl)-benzoic-acid | MGAM | Cumin |
| 1,10-dehydro-10-deoxy-9-oxozedoarondiol | RBP4 | Turmeric |
| 1,2-diphenylcyclobutane | MGAM; NR5A2; RBP4 | Basil |
| 1,3-dicaffeoylquinic acid | AMY2A; MGAM; NR5A2; PTPN9 | Fennel; yarrow |
| 1,4-dicaffeoylquinic acid | AMY2A; DPP4; FBP1; MGAM; NR5A2; PTPN9; PYGL | Dill; fennel; yarrow |
| 1,5-bis(4-hydroxy-3-methoxyphenyl)-1,4-pentadien-3-one | AMY2A; MGAM | Turmeric |
| 1,5-bis(4-hydroxyphenyl)-penta-(1E,4E)-1,4-dien-3-one | MGAM; RBP4 | Turmeric |
| 1,5-dicaffeoylquinic acid | AMY2A; DPP4; MGAM; NR5A2; PPARA | Fennel; yarrow |
| 1,5-dihydroxy-1-(4-hydroxy-3-methoxyphenyl)-7-(4-hydroxyphenyl)-4,6-heptadiene-3-one | MGAM; PPARA; RBP4 | Turmeric |
| 1,5-dihydroxy-1-(4-hydroxyphenyl)-7-(4-hydroxy-3-methoxyphenyl)-4,6-heptadiene-3-one | MGAM; PPARA; RBP4 | Turmeric |
| 1,5-dihydroxy-1,7-bis(4-hydroxy-3-methoxyphenyl)-4,6-heptadiene-3-one | MGAM; PPARA; RBP4 | Turmeric |
| 1,5-dihydroxy-1,7-bis(4-hydroxyphenyl)-4,6-heptadiene-3-one | MGAM; PPARA; RBP4 | Turmeric |
| 1,5-epoxy-3-carbonyl-1,7-bis(4-hydroxyphenyl)-4,6-heptadiene | AKR1B1; AMY2A; MGAM; NR5A2; PTPN9; RBP4 | Turmeric |

| | | |
|--|--|--------------|
| 1,7-bis(4-hydroxy-3-methoxyphenyl)-1,4,6-heptatrien-3-one | AKR1B1; MGAM | Turmeric |
| 1,7-bis-(4'-hydroxy-3'-methoxyphenyl)-3,5-heptadione | RBP4 | Ginger |
| 1,7-bis-(4'-hydroxy-3'-methoxyphenyl)-3-hydroxy-acetoxyheptane | MGAM | Ginger |
| 1,7-bis-(4'-hydroxy-3'-methoxyphenyl)-4-heptene-3-one | MGAM; PPARA; RBP4 | Ginger |
| 1,7-bis-(4'-hydroxy-3'-methoxyphenyl)-5-methoxyheptan-3-one | RBP4 | Ginger |
| 1,7-bis(4-hydroxyphenyl)-1,4,6-heptatrien-3-one | AKR1B1; AMY2A; MGAM | Turmeric |
| 1,7-bis(4-hydroxyphenyl)-1-heptene-3,5-dione | AKR1B1; MGAM; RBP4 | Turmeric |
| 1-[(2E,4E)-2,4-dodecadienoyl]pyrrolidine | RBP4 | Black pepper |
| 10-epigazaniolide | NR5A2 | Bay leaves |
| 10-gingerdiol | RBP4 | Ginger |
| 10-gingerdione | RBP4 | Ginger |
| 10-shogaol | RBP4 | Ginger |
| 11,12,20-trihydroxy-abieta-8,11,13-triene | MGAM | Sage |
| 11,13-dehydrosantonin | NR5A2; RBP4 | Bay leaves |
| 11-paradol | RBP4 | Ginger |
| 12-hydroxy-20-norabieta-8,11,13-triene | MGAM | Sage |
| 12-methoxy-1-oxo-20-norabieta-8,11,13-triene | RBP4 | Sage |
| 12-shogaol | RBP4 | Ginger |
| 13-cis-crocetin | AMY2A; DPP4 | Saffron |
| 18a-glycyrrhizin | AMY2A; DPP4; FBP1; INSR; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| 1-Caffeoylquinic acid | MGAM; PTPN9; RBP4 | Fennel |
| 1-cinnamoylpiperidine | MGAM; RBP4 | Black pepper |
| 1-dehydro-3-gingerdione | RBP4 | Ginger |
| 1-dehydro-6-gingerdione | RBP4 | Ginger |
| 1-dehydro-6-gingerol | RBP4 | Ginger |
| 1-dehydro-8-gingerdione | RBP4 | Ginger |

| | | |
|--|---|------------|
| 1-hydroxy-1,7-bis(4-hydroxy-3-methoxyphenyl)-6-heptene-3,5-dione | AKR1B1; AMY2A; MGAM; PPARA; PTPN9 | Turmeric |
| 1-hydroxymethyl-B-methyl-benzenethanol | MGAM | Cumin |
| 1-hydroxypinoresinol-1-B-D-glucopyranoside | AMY2A; MGAM | Sage |
| 1-O-(4-hydroxybenzoyl)-B-D-glucopyranose | RBP4 | Rosemary |
| 1-oxomiltirone | RBP4 | Sage |
| 2"-rhamnosylisovitexin | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PTPN9; PYGL | Bay leaves |
| 2-(2'-methyl-1'-propenyl)-4, 6-dimethyl-7-hydroxyquinoline | MGAM; RBP4 | Turmeric |
| 2-(4-hydroxy-3-methoxyphenyl)-ethyl-O-B-D-glucopyranoside | MGAM; PTPN9; RBP4 | Bay leaves |
| 2,2,4-trimethyl-3-(3,8,12,16-tetramethyl-heptadeca-3,7,11,15-tetraenyl)-cyclohexanol | MGAM; PPARA; PPARG | Turmeric |
| 2,2'-oxybis[octahydro-7,8,8-trimethyl-4,7-methanobenzofuran | AMY2A; HSD11B1; MGAM; NR5A2; PDK2 | Turmeric |
| 2,3',4,4',a-pentahydroxy-3,5'-diprenyl-dihydrochalcone | AMY2A; FBP1; HSD11B1; MGAM; NR5A2; PPARA; PPARG | Liquorice |
| 2,3',4,4',a-pentahydroxy-3-prenyl-dihydrochalcone | AKR1B1; AMY2A; FBP1; MGAM; NR5A2; PPARA; RXRA; RBP4 | Liquorice |
| 2,3',4,4'-tetrahydroxy-3,5'-diprenylchalcone | AMY2A; DPP4; MGAM; NR5A2; PDK2; PPARA; PPARG | Liquorice |
| 2',3,4'-trihydroxy-3'-g,g-dimethylallyl-6",6"-dimethylpyrano[2",3":4,5]chalcone | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PPARA; PPARD; PPARG; PTPN9 | Liquorice |

| | | |
|--|---|-----------------|
| 2',3-dihydroxy-4'-methoxy-3",3"-dimethylpyrano[2",3":7,8]isoflavanone | AMY2A; FBP1; HSD11B1; MGAM; NR5A2; PPARA | Liquorice |
| 2,4-decadienoic acid piperidine | RBP4 | Black pepper |
| 2,6,11,15-tetramethyl-hexadeca-2,6,8,10,14-pentaene | RBP4 | Turmeric |
| 2,8-epoxy-5-hydroxybisabola-3,10-diene-9-one | RBP4 | Turmeric |
| 20-hydroxyferruginol | MGAM; RBP4 | Sage |
| 20-oxopregn-16-en-12-yl acetate | AMY2A; HSD11B1; NR5A2 | Turmeric |
| 22-acetoxylglycyrrhizin | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| 23-Monosulfate ester of 2a,23-dihydroxyurs-12-ene-28-oic acid 3-O-β-Dglucopyranoside | AMY2A; NR5A2 | Lemon balm |
| 24-Methylene cycloartenol | AKR1B1; AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARG | Caraway |
| 2-C-methyl-D-erythritol-1-O-B-D-(6-O-4-hydroxybenzoyl)glucopyranoside | MGAM; PTPN9 | Aniseed |
| 2-C-methyl-D-erythritol-1-O-B-D-(6-O-4-methoxybenzoyl)glucopyranoside | MGAM; PTPN9 | Aniseed |
| 2-hydroxymethyl-benzoate | FBP1 | Basil |
| 2-methoxy-5-hydroxybisabola-3,10-diene-9-one | RBP4 | Turmeric |
| 2-methyl-6-(4-hydroxy-3-methylphenyl)-2-hepten-4-one | RBP4 | Turmeric |
| 2-methyl-6-(4-hydroxyphenyl)-2-hepten-4-one | RBP4 | Turmeric |
| 2-methylcortisol | MGAM | Ginger |
| 2-methylene-5a-cholestan-3b-ol | AMY2A; MGAM | Ginger |
| 2-Phenylethyl phenyl acetate | RBP4 | Clove; rosemary |
| 3-(3,4-dihydroxyphenyl)lactic acid | MGAM | Lemon balm |
| 3-(4-hydroxy-3-methoxyphenyl)propane-1,2-diol-2-O-B-D-(6-O-galloyl)glucopyranoside | MGAM; PDK2; PTPN9 | Allspice |
| 3'-(R)-MTPa ester | AKR1B1; AMY2A; MGAM; NR5A2; PPARA; PTPN9; RBP4 | Fennel |

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| 3'-(S)-MTPa ester | AKR1B1; AMY2A; NR5A2; PPARA; PTPN9; RBP4 | Fennel |
| 3,23-Disulfate ester of 3b,19a,23-trihydroxyurs-12-en-28-oic acid | MGAM | Lemon balm |
| 3,3',4,4'-tetrahydroxy-2'-methoxy-5-prenylchalcone | AKR1B1; AMY2A; MGAM; PPARA; RBP4 | Liquorice |
| 3,3',4'-tri-O-methylelagic-acid | RBP4 | Clove |
| 3,4-dicaffeoylquinic acid | AKR1B1; AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL | Lemongrass; yarrow |
| 3,4-dihydroxyphenylacetic acid | MGAM | Thyme |
| 3,4-dimethoxy-3,4-desmethylenedioxcubebin | AKR1B1; AMY2A; PPARA | Black pepper |
| 3,4-seco-(24Z)-cycloart-4(28),24-diene-3,26-dionic acid,26-methyl ester | MGAM; NR5A2 | Star anise |
| 3,5-diacetoxy-7-(4-hydroxy-3-methoxyphenyl)-1-(3,4-dihydroxy-5-methoxyphenyl)heptane | MGAM | Ginger |
| 3,5-dicaffeoylquinic_acid | ARB1B1; AMY2A; DPP4; MGAM; NR5A2; PDK2 | Aniseed; dill; lemongrass; yarrow |
| 3,5-dihydroxy-1-(4-hydroxy-3,5-dimethoxyphenyl)-7-(4-hydroxy-3-methoxyphenyl)heptane | MGAM | Ginger |
| 3,5-dihydroxy-1,7-bis(4-hydroxy-3-methoxyphenyl)heptane | MGAM; RBP4 | Ginger |
| 3a-acetoxyeudesma-1,4(15),11(13)-trien-12,6a-olide | NR5A2 | Bay leaves |
| 3-acetoxy-3-dihydrodemethoxy-6-shogaol | RBP4 | Ginger |
| 3-acetoxy-5-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-7-(3,4-dihydroxyphenyl)heptane | MGAM; PPARA | Ginger |
| 3-dihydro-6-demethoxyshogaol | RBP4 | Ginger |
| 3-gentiobiosylkaempferol | AMY2A; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Saffron |
| 3'-geranylchalconaringenin | AKR1B1; MGAM; NR5A2; PPARA | Hops |

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| 3-hydroxy-1,7-bis-(4-hydroxyphenyl)-6-heptene-1,5-dione | AKR1B1; PPARA; PTPN9; RBP4 | Turmeric |
| 3'-hydroxy-4'-O-methylglabridin | AMY2A; DPP4; FBP1; MGAM; NR5A2 | Liquorice |
| 3-hydroxyglabrol | AMY2A; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL; RBP4; RXRA | Liquorice |
| 3-methoxyapigenin | AMY2A; MGAM; NR5A2; RBP4 | Oregano |
| 3-methoxyglabridin | AMY2A; DPP4; MGAM; NR5A2 | Liquorice |
| 3-O-p-coumaroylquinic acid | MGAM; PPARA; PTPN9 | Cumin; dill |
| 3-oxoeudesma-1,4,11(13)-trien-12,6a-olide | NR5A2; RBP4 | Bay leaves |
| 4''-(4'''-hydroxyphenyl-3-methoxy)-2''-oxo-3''-butenyl-3-(4'-hydroxyphenyl)-propenoate | AKR1B1; MGAM; RBP4 | Turmeric |
| 4-(1H-1,2,3,4-tetrazol-1-yl)-benzene-acetic-acid | RBP4 | Ginger |
| 4-(3,4-dihydroxybenzoyloxymethyl)-phenyl-B-D-glucopyranoside | AMY2A; MGAM; PPARA | Oregano |
| 4, 5-dihydroxybisabola-2,10-diene | RBP4 | Turmeric |
| 4,5-dicaffeoylquinic acid | AKR1B1; AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL | Aniseed; lemongrass; yarrow |
| 4,5-dihydropiperine | AKR1B1; NR5A2; PPARA; RBP4 | Black pepper |
| 4',7-dihydroxyflavone | AMY2A; MGAM; NR5A2; PPARA; RBP4 | Liquorice |
| 4,8,12,16-tetramethylheptadecam-4-olide | RBP4 | Saffron |
| 4-[[[(2',5'-Dihydroxybenzoyl)oxy]methyl]phenyl O-b-D-glucopyranoside | AMY2A; MGAM; PPARA | Oregano |

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| 4-[[[(3',4'-Dihydroxybenzoyl)oxy]methyl] phenyl O-b-D-[6-O-(3",5"-dimethoxyl-4"-hydroxybenzoyl)] glucopyranoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Oregano |
| 4-allyl-2-(3-methylbut-2-enyl)-1,6-methylenedioxybenzene-3-ol | RBP4 | Star anise |
| 4-allylphenol | MGAM | Allspice; basil; clove |
| 4'-carbomethoxy-2'-hydroxyphenyl-ferulate | MGAM | Basil |
| 4'-geranyloxyferulic acid (GOFa) | MGAM; RBP4 | Aniseed; dill |
| 4-hydroxyacetophenone-4-O-B-D-apiofuranosyl-(1-6)-O-B-D-glucopyranoside | PTPN9 | Sage |
| 4-hydroxybisabola-2,10-diene-9-one | RBP4 | Turmeric |
| 4-hydroxyglabrin | AMY2A; FBP1; MGAM; NR5A2; PDK2; PPARA | Liquorice |
| 4-hydroxymethylbenzoic acid | FBP1 | Basil |
| 4-Methoxy-5-hydroxybisabola-2,10-diene-9-one | RBP4 | Turmeric |
| 4-methylene-5-hydroxybisabola-2,10-diene-9-one | RBP4 | Turmeric |
| 4-Methylstilbene | MGAM; NR5A2; RBP4 | Dill |
| 4-O-B-D-glucopyranosyloxybenzoic acid | PPARA; RBP4 | Aniseed |
| 4-O-feruloylquinic acid | MGAM | Lemongrass |
| 4'-O-methyl-3'-prenylchalconaringenin | AKR1B1; MGAM; PPARA; RXRA | Hops |
| 4'-O-methylglabridin | AKR1B1; AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2 | Liquorice |
| 4-O-methylguaiacyl-glycerol-2'-O-B-D-glucopyranoside | MGAM | Aniseed |
| 4-O-p-coumaroylquinic acid | FBP1; MGAM; PTPN9 | Cumin; dill; fennel |
| 4-vinylsyringol | AMY2A; DPP4; FFAR1; MGAM; NR5A2; RBP4 | Ginger |
| 5-(5-carboxymethyl-2-oxocyclopentyl)-3Z-pentenyl-B-D-(6-O-galloyl)glucopyranoside | DPP4; MGAM; NR5A2; PDK2; PPAPAR; PTPN9; PYGL | Allspice |
| 5,10(15)-Cadienen-4-ol | RBP4 | Black pepper |

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| 5,4'-dihydroxy-6,7,8-trimethoxyflavone | RBP4 | Thyme |
| 5,4'-dihydroxy-6,7-dimethoxyflavone | AMY2A; RBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9; RBP4 | Thyme |
| 5,4'-dihydroxy-7-methoxyflavone | AMY2A; MGAM; RBP4 | Thyme |
| 5,6-diepikarpoxanthin (Carpoxanthin) | MGAM; NR5A2 | Paprika |
| 5-[4"-hydroxy-3"-methyl-2"-butenyloxy]-6,7-furocoumarin | MGAM; RBP4 | Dill |
| 5-Coumaroylquinic acid | MGAM; PPARA; RBP4 | Fennel |
| 5-epi-7-epi-a-eudesmol | RBP4 | Lemongrass |
| 5'-formylglabridin | AKR1B1; AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PPARA | Liquorice |
| 5-hydroxy-1-(3,4-dihydroxy-5-methoxyphenyl)-7-(4-hydroxy-3-methoxyphenyl)-3-heptanone | MGAM; PPARA | Ginger |
| 5-hydroxy-1-(4-hydroxy-3-methoxyphenyl)-7-(3,4-dihydroxyphenyl)-3-heptanone | MGAM; PPARA; RBP4 | Ginger |
| 5-hydroxy-1,7-bis(4-hydroxy-3-methoxyphenyl)-3-heptanone | RBP4 | Ginger |
| 5-hydroxy-7,4'-dimethoxyflavone | AMY2A; FBP1; MGAM; NR5A2; PDK2; PTPN9 | Thyme |
| 5-hydroxyl-1-(4-hydroxy-3-methoxyphenyl)-7-(4-hydroxyphenyl)-4,6-heptadiene-3-one | AMY2A; MGAM; RBP4 | Turmeric |
| 5-hydroxyl-1,7-bis(4-hydroxy-3-methoxyphenyl)-4,6-heptadiene-3-one | PPARA | Turmeric |
| 5-hydroxyl-7-(4-hydroxy-3-methoxyphenyl)-1-(4-hydroxyphenyl)-4,6-heptadiene-3-one | AKR1B1; RBP4 | Turmeric |
| 5-hydroxyl-ar-turmerone | RBP4 | Turmeric |
| 5'-methoxylicarin-B | PPARA | Nutmeg |
| 5-methoxypsoralen (bergapten) | RBP4 | Fennel; parsley |
| 5-O-methylglycyrol | AMY2A; MGAM; NR5A2; PPARD | Liquorice |
| 6"-acetylapiin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9 | Parsley |

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| 6"-O-(E)-coumaroylnepitrin | PAMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL | Rosemary |
| 6"-O-(E)-feruloylglucopyranoside | MGAM | Sage |
| 6"-O-(E)-feruloylhomoplantagin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA | Rosemary |
| 6"-O-(E)-feruloylnepitrin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9 | Rosemary |
| 6, 8-C-dihexosylapigenin | AMY2A; DPP4; HSD11B1; MGAM | Fennel |
| 6,7-dimethoxyrosmanol | MGAM | Sage |
| 6,8-diprenylnaringenin | AKR1B1; AMY2A; DPP4; MGAM; NR5A2; PDK2; PPARA | Hops |
| 6-acetyl-5-hydroxy-4-methylcoumarin (Liqcoumarin) | RBP4 | Liquorice |
| 6-C-B-D-(6'-O-galloyl)glucosylnoeugenin | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PTPN9; PYGL | Clove |
| 6-C-pentosyl-8-C-hexosyl apigenin | DPP4 | Lemongrass |
| 6-C-pentosyl-8-C-hexosyl luteolin | AMY2A; DPP4; FBP1; NR5A2 | Lemongrass |
| 6-C-pentosyl-luteolin | AMY2A; FBP1; MGAM; PDK2; PPARA | Lemongrass |
| 6-Epidesacetyl-laurenobiolide | NR5A2 | Bay leaves |
| 6-geranylnaringenin | AKR1B1; AMY2A; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA | Hops |

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| 6-gingerdiol acetaldehyde acetal | RBP4 | Ginger |
| 6-gingerdiol geranial acetal | MGAM; PPARA | Ginger |
| 6-hydroxy-10-shogaol | RBP4 | Ginger |
| 6-hydroxy-6-shogaol | RBP4 | Ginger |
| 6-hydroxy-6-shogaol | RBP4 | Ginger |
| 6-hydroxy-8-shogaol | RBP4 | Ginger |
| 6-hydroxyluteolin-7-O-glucoside | AMY2A; DPP4; FBP1; HSD11B1; MGAM; PDK2; PPARA; PTPN9 | Rosemary; sage; yarrow |
| 6-hydroxyluteolin-7-O-glucuronide | AMY2A; DPP4; FBP1; HSD11B1; MGAM; PDK2; PPARA; PTPN9 | Sage |
| 6-paradoldiene | RBP4 | Ginger |
| 6-prenylnaringenin | AMY2A; MGAM; NR5A2; PPARA | Hops |
| 6-shogaol | RBP4 | Ginger |
| 7,4-dimethylapigenin | RBP4 | Thyme |
| 7,8-dihydroxy-4'-methoxy-6-prenylisoflavanone | AMY2A; DPP4; MGAM; PPARA; PTPN9 | Liquorice |
| 7-a-hydroxy manool | RBP4 | Dill |
| 7-a-hydroxycampesterol | DPP4; HSD11B1; MGAM; NR5A2; PPARD | Fennel |
| 7-epi-a-selinene | RBP4 | Bay leaves; sage |
| 7-epi-sesquithujene | RBP4 | Turmeric |
| 7-gingerol | RBP4 | Ginger |
| 7-hydroxycarveol-7-O-B-D-glucopyranoside | MGAM; RBP4 | Caraway |
| 7-isopentenyloxycoumarin | RBP4 | Aniseed; dill |
| 7-methoxyrosmanol | MGAM | Sage |
| 7-methylepirosmanol | MGAM | Rosemary |

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| 8,8-dimethyl-3,4-dihydro-2H,8H-pyrano[2,3-f]-chromon-3-ol | RBP4 | Liquorice |
| 8-C-B-D-(6'-O-galloyl)glucosylnoreugenin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PPARA; PTPN9; PYGL | Clove |
| 8'-geranylneringenin | AKR1B1; AMY2A; DPP4; GCK; MGAM; NR5A2; PDK2; PPARA | Hops |
| 8-hydroxymethyl-8-methyl-3,4-dihydro-2H,8H-pyrano[2,3-f]-chromon-3-ol | RBP4 | Liquorice |
| 8-paradol | RBP4 | Ginger |
| 8-paradoldiene | RBP4 | Ginger |
| 8-prenylneringenin | AMY2A; MGAM; NR5A2; PPAPA; RBP4 | Hops |
| 9,10-secocholesta-5Z,7E,10(19)-triene-3b,24,25-triol | AMY2A; HSD11B1; MGAM; NR5A2 | Ginger |
| α -amorphanol (cadinane) | RBP4 | aniseed |
| α -amorphene | RBP4 | Basil; black pepper; cardamom: clove: lemongrass |
| α -amyrin | AMY2A | Rosemary; thyme |
| abietatriene | RBP4 | Rosemary |
| α -bisabolol-12-ol | RBP4 | Dill |
| α -bisabolene | RBP4 | Basil; cardamom; ginger; hops; oregano |
| α -bulnesene | RBP4 | Oregano |
| abyssinone-II | AKR1B1; AMY2A; DPP4; MGAM; NR5A2; PPARA; PTPN9; RBP4; RXRA | Liquorice |
| acacetin | MGAM; RBP4 | Fennel |
| acacetin 7-O-[4'''-O-acetyl]-b-D-apiofuransyl-(1-3)]-b-D-xylopyranoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PPARG; PPARG; PTPN9 | Oregano |

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| acacetin 7-O-[6'''-O-acetyl-b-D-galactopyranosyl-(1-3)]-b-D-xylopyranoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARD; PTPN9; PYGL | Oregano |
| acacetin-7-O-[6'''-O-acetyl-b-D-galactopyranosyl-(1-2)]-b-D-glucopyranoside | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Oregano |
| acacetin-7-O-rutinoside | AMY2A; DPP4; FBP1; GCK; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PTPN9; PYGL | Fennel |
| a-cadinene | RBP4 | Allspice; sage |
| a-cadinol | RBP4 | Allspice; aniseed; basil; clove; oregano; thyme; yarrow |
| a-calacorene | RBP4 | Clove; dill; rosemary; yarrow |
| achillinin-A | RBP4 | Yarrow |
| achillinin-B | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2 | Yarrow |
| achillinin-C | AMY2A; HSD11B1; MGAM; PDK2; PTPN9 | Yarrow |
| achiterpenoside-A | AMY2A | Yarrow |
| a-curcumene | RBP4 | Black pepper; caraway; cumin; ginger; turmeric; yarrow |
| adhumulone | MGAM | Hops |
| adlupulone | MGAM; NR5A2 | Hops |
| a-guaiene | RBP4 | Basil; clove; lemongrass; oregano |
| a-gurjunene | RBP4 | Allspice; black pepper; lemongrass; oregano; thyme |
| a-hydroxyhydrocaffeic acid | MGAM | Basil |
| alangioside-A | MGAM | Bay leaves |

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| albiziasaponin-B | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| allo-aromadendrene | RBP4 | Allspice; basil; bay leaves; cardamom; clove; dill; ginger; marjoram; oregano; sage; thyme |
| alpha-copaene | RBP4 | Allspice; basil; bay leaves; black pepper; caraway; cardamom; clove; fennel; ginger; hops; nutmeg; paprika; parsley; rosemary |
| amburoside-A | AMY2A; DPP4; MGAM; NR5A2; PPARA; RBP4 | Oregano |
| amentoflavone | AKR1B1; AMY2A; DPP4; FBP1; GCK; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Cumin; yarrow |
| ampelopsin | MGAM; PPARA | Allspice |
| a-muurolene | RBP4 | Aniseed; black pepper; clove; ginger; lemon balm; lemongrass; oregano; paprika; rosemary; sage |
| anemosapogenin | NR5A2; PTPN9 | Bay leaves |
| anisoxide | RBP4 | Star anise |
| anethol | MGAM | Caraway |
| a-oxobisabolene | RBP4 | Lemongrass; turmeric |
| a-patchoulene | RBP4 | Dill |
| a-p-dimethylstyrene | MGAM | Cardamom; nutmeg |
| apigenin | AMY2A; MGAM; NR5A2; RBP4 | Aniseed; basil; black pepper; cumin; dill; fennel; fenugreek; lemon balm; |

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| | | lemongrass; marjoram; oregano; parsley; rosemary; sage; thyme; yarrow |
| apigenin 7-O-[6'''-O-acetyl-b-D-galactopyranosyl-(1-3)]-b-D-xylopyranoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL | Oregano |
| apigenin acetylglucoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Sage |
| apigenin-4-O-glucoside | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PTPN9 | Yarrow |
| apigenin-6-C-[B-D-xylopyranosyl-(1'''-2'')-B-D-galactopyranoside]-7-O-B-D-(6''''-O-pcoumaroylglucopyranoside) | AMY2A; DPP4; MGAM; PDK2; PPARA; PTPN9 | Clove |
| apigenin-6-C-[B-D-xylopyranosyl-(1'''-2'')-B-D-galactopyranoside]-7-O-B-D-glucopyranoside | AMY2A; MGAM; NR5A2; PDK2 | Clove |
| apigenin-7-O-glucoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9 | Aniseed; cumin; fenugreek; lemon balm; marjoram; oregano; rosemary; sage; yarrow |
| apigenin-7-O-glucuronide | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PPARA; PTPN9 | Fennel; oregano |
| apigenin-7-O-rutinoside | AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL | Oregano; rosemary |
| apiin | AMY2A; DPP4; FBP1; HSD11B1; INSR; | Parsley |

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| | MGAM; NR5A2; PPARA; PPARG; PTPN9 | |
| apioglycyrrhizin | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| araboglycyrrhizinic | AMY2A; DPP4; FBP1; INSR; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| arachidic acid | RBP4 | Aniseed; basil; caraway; cardamom; dill; ginger; paprika; turmeric |
| arjunolic acid | AMY2A | Clove |
| aromadendrin | PPARA; RBP4 | Thyme |
| ar-turmerol | RBP4 | Turmeric |
| ar-turmerone | RBP4 | Turmeric |
| a-santalene | RBP4 | Black pepper; turmeric |
| a-santalol | RBP4 | Marjoram; sage; turmeric |
| a-selinene | RBP4 | Allspice; black pepper; cardamom; clove; hops; lemongrass; oregano; thyme; turmeric; yarrow |
| asiatic acid | MGAM | Clove; rosemary |
| asparasaponin I | AMY2A; DPP4; FBP1; MGAM; NR5A2 | Fenugreek |
| a-terpineol-8-O-B-D-(6-O-galloyl)glucopyranoside | MGAM; PDK2; PPARA; PTPN9 | Allspice |
| a-terpinyl[a-L-(2-O-galloyl)arabinofuranosyl]-(1-6)-B-D-glucopyranoside | AMY2A; DPP4; FBP1; MGAM; PPARA; PTPN9 | Allspice |
| a-turmerol | RBP4 | Turmeric |
| a-turmerone | RBP4 | Turmeric |
| augustic acid | AMY2A | Rosemary |

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| auraptene | AKR1B1; MGAM; NR5A2; RBP4 | Dill |
| a-ylangene | RBP4 | Bay leaves; black pepper; cardamom; dill; oregano; rosemary |
| bacilicin | MGAM | Basil |
| b-amyrin | AMY2A; DPP4; MGAM; NR5A2; PDK2; PTPN9 | Liquorice; rosemary; thyme |
| basilimoside | AMY2A | Basil |
| b-bisabolene | RBP4 | Aniseed; black pepper; caraway; cardamom; clove; dill; ginger; hops; oregano; parsley; thyme; turmeric |
| b-caryophyllene | RBP4 | Allspice; basil; bay leaves; black pepper; caraway; cardamom; cinnamon; clove; cumin; dill; fennel; fenugreek; ginger; hops; lemon balm; liquorice; marjoram; nutmeg; oregano; parsley; rosemary; sage; thyme; turmeric; yarrow |
| b-copaene | RBP4 | Bay leaves; black pepper |
| b-cubebene | NR5A2; RBP4 | Basil; bay leaves; black pepper; cardamom; dill; ginger; lemon balm; nutmeg; rosemary; turmeric |
| b-curcumene | RBP4 | Turmeric |
| behenic acid | RBP4 | Ginger |
| b-elemol | RBP4 | Hops |
| benzylbenzoate | RBP4 | Cinnamon; clove |
| betulin | NR5A2 | Rosemary |
| betulinic acid | AMY2A; NR5A2; PTPN9 | Clove; rosemary; sage |
| b-germacene | RBP4 | Turmeric |

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| b-guaiene | RBP4 | Bay leaves; black pepper; clove; hops; rosemary; thyme; yarrow |
| bicyclo(4.4.0)dec-1-en,2-isopropyl-5-methyl-9-methylene | RBP4 | Bay leaves |
| bicyclo[7.2.0]undecane, 10,10-dimethyl-2,6-bis(methylene) | RBP4 | Turmeric |
| bicyclogermacrene | RBP4 | Basil; bay leaves; marjoram; oregano; yarrow |
| bisacurone B | RBP4 | Turmeric |
| bisacurone C | RBP4 | Turmeric |
| bisdesmethoxycurcumin | AKR1B1; MGAM; NR5A2; RBP4 | Turmeric |
| brachyamide B | AKR1B1; NR5A2; PPARA; RBP4 | Black pepper |
| b-selinene | RBP4 | Allspice; basil; bay leaves; black pepper; caraway; cardamom; oregano; yarrow |
| b-sesquiphellandrene | RBP4 | Aniseed; basil; ginger; lemongrass; oregano; turmeric |
| b-sitostenone | AMY2A; MGAM; NR5A2 | Cardamom; thyme |
| b-sitosterol | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PPARG | Basil; bay leaves; black pepper; caraway; cardamom; lemon balm; liquorice; saffron; thyme; turmeric |
| b-sitosterol-3-O-B-D-glucoside | MGAM | Clove |
| b-turmerone | RBP4 | Turmeric |
| bulnesol | RBP4 | Hops |
| cadalene | RBP4 | Cinnamon; rosemary; yarrow |
| caffeic acid | MGAM | Basil; black pepper; caraway; cinnamon; clove; cumin; dill; fennel; fenugreek; lemon balm; lemongrass; marjoram; oregano; rosemary; saffron; sage; thyme; yarrow |

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| caffeoyl-N-tryptophan | AKR1B1; AMY2A; DPP4; FBP1; MGAM; PDK2; PPAPA; RBP4; RXRA | Dill |
| calamene | RBP4 | Basil; black pepper; clove; oregano; rosemary; thyme |
| calarene | RBP4 | Bay leaves; thyme; yarrow |
| calebin a | AKR1B1; MGAM; PPARA | Turmeric |
| campesterol | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PPARG; PYGL | Bay leaves; caraway; thyme |
| capsaicin | MGAM | Paprika; allspice |
| capsanthin-3,6-epoxide | AMY2A; NR5A2 | Paprika |
| capsanthin-5,6-epoxide | AMY2A; NR5A2 | Paprika |
| capsiate | RBP4 | Paprika |
| carbenoxolone | AMY2A; DPP4; FBP2; MGAM; PDK2; PTPN9 | Liquorice |
| carlinoside | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PPARG | Lemongrass |
| carnosic acid | AMY2A; MGAM; RBP4 | Basil; fennel; marjoram; oregano; rosemary; sage; thyme |
| carnosol | MGAM | Marjoram; oregano; rosemary; sage |
| carpaine | AMY2A; DPP4; MGAM; NR5A2; PPARD | Fenugreek |
| caryophyllene alcohol | RBP4 | Dill |
| caryophyllenol II | RBP4 | Thyme |

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| cassiatannin a | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; RBP4 | Cinnamon |
| cassioccidentalinalin B | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARG; PTPN9; PYGL | Lemongrass |
| catechin | AMY2A; MGAM; NR5A2; RBP4 | Basil; bay leaves; cinnamon; cumin; fenugreek; hops; lemon balm; oregano; rosemary; thyme |
| catechin gallate | AKR1B1; AMY2A; DPP4; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL | Hops |
| chamazulene | RBP4 | Yarrow |
| chavicine | AKR1B1; NR5A2; PPARA; RBP4; RXRA | Black pepper |
| chlorogenic acid | MGAM; PTPN9; RBP4 | Aniseed; basil; black pepper; caraway; cinnamon; cumin; dill; fennel; fenugreek; lemon balm; lemongrass; marjoram; oregano; rosemary; saffron; sage; thyme; yarrow |
| chrysanthone c | RBP4 | Yarrow |
| chrysoeriol | AMY2A; RBP4 | Parsley |
| cinnamatannin B1 | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; PYGL; RBP4 | Cinnamon |
| cinnamon-3c(Ec)-1Gc(EGc)-tetramer | AMY2A; DPP4; MGAM; PDK2; PYGL | Cinnamon |
| cinnamon-c(Ec)-tetramer 1 | AMY2A; DPP4; FBP1; INSR; MGAM; PDK2 | Cinnamon |

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| cinnamon-c(Ec)-tetramer 2 | AMY2A; DPP4; MGAM; PDK2; PTPN9 | Cinnamon |
| cinnamophilin | AMY2A; MGAM; NR5A2; RBP4 | Cinnamon |
| cinnamtannin D1 | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Cinnamon |
| cis-11,14-eicosadienoic acid | RBP4 | Ginger |
| cis-g-bisabolene | RBP4 | Caraway; clove; ginger; hops; turmeric |
| cis-miyabenol c | AMY2A; DPP4; MGAM; PPARA; PTPN9; PYGL | Fennel |
| cis-muurola-3-5-diene | RBP4 | Basil |
| clerosterol | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PPARG | Caraway |
| clovane-2,9-diol | RBP4 | Clove |
| cnidilin | RBP4 | Parsley |
| cohumulone | MGAM | Hops |
| colettiside I | AMY2A; FBP1; MGAM | Fenugreek |
| colupulone | MGAM; NR5A2 | Hops |
| coniferin | RBP4 | Caraway |
| cosmosiin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9; RXRA | Parsley |
| costunolide | NR5A2; RBP4 | Bay leaves |
| coumaperine | MGAM; RBP4 | Black pepper |
| crisimaritin | AMY2A; FBP1; MGAM; NR5A2; PDK; PPARA; PTPN9; RBP4 | Rosemary; sage; thyme |

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| crocin 1 | AMY2A; DPP4; FBP1; PDK2 | Saffron |
| crocin 2 | MGAM; NR5A2; PDK2; PPARA; PTPN9 | Saffron |
| crocin 3 | MGAM; PPARA | Saffron |
| cryptochlorogenic acid | FBP1; MGAM; PTPN9 | Aniseed; cumin; dill; fennel; lemongrass; yarrow |
| cubebin | AKR1B1; MGAM; NR5A2; PPARA; RBP4 | Black pepper |
| cuminaldehyde | MGAM | Basil; caraway; cardamom; cumin; fennel; fenugreek; liquorice |
| cuminoid E | PPARA | Cumin |
| cuminol | MGAM | Caraway; cumin; dill; nutmeg |
| curculonone_c | RBP4 | Turmeric |
| curculonone_D | RBP4 | Turmeric |
| curcumenol | RBP4 | Turmeric |
| curcumenone | RBP4 | Turmeric |
| curcumin (enol form) | AKR1B1; AMY2A; MGAM | Ginger; turmeric |
| curcumin (keto form) | AKR1B1; AMY2A; PPARA; RBP4 | Turmeric |
| curcuphenol | RBP4 | Turmeric |
| curdione | RBP4 | Turmeric |
| curlone | RBP4 | Turmeric |
| cyanidin | AKR1B1; AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PTPN9; RBP4 | Bay leaves; Nutmeg |
| cyanidin-3-O-glucoside | AMY2A; FBP1; MGAM; NR5A2; PDK2 | Bay leaves |

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| cyanidin-3-O-rutinoside | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK; PPARA; PTPN9 | Bay leaves |
| cycloaretnol | AMY2A; GCK; HSD11B1; MGAM; NR5A2; PPARG | Caraway |
| cyclocurcumin | AKR1B1; AMY2A; MGAM; PPARA | Turmeric |
| cyclohexadecane | RBP4 | Bay leaves |
| cyclooctacosane | AMY2A; MGAM; NR5A2 | Bay leaves |
| cyclopropa[5,6]-a-nor-5a-androstane-3-dione,3,6B-dihydro-17b-h | NR5A2 | Ginger |
| cyclotetracosane | AMY2A; HSD11B1; MGAM; NR5A2; PPARD; PPARG | Bay leaves |
| cymbopogonol | AKR1B1; AMY2A; HSD11B1; MGAM; NR5A2; PTPN9; PYGL | Lemongrass |
| cynaroside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Lemongrass |
| daidzein | AMY2A; NR5A2; RBP4 | Dill; hops |
| danshensu | MGAM | Sage |
| d-cadinene | RBP4 | Allspice; basil; bay leaves; black pepper; caraway; cardamom; cinnamon; clove; dill; fennel; ginger; hops; lemongrass; oregano; rosemary; thyme; yarrow |
| deca-2E,4E,6E,8Z-tetraenoic acid piperideide | RBP4 | Yarrow |
| deca-2E,4E,6Z,8Z tetraenoic acid piperideide | RBP4 | Yarrow |
| deca-2E,4E,6Z-trienoic acid piperideide | RBP4 | Yarrow |

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| deca-2E,4E,8Z-trienoic acid isobutylamide | RBP4 | Yarrow |
| deca-2E,4E,8Z-trienoic acid piperideide | RBP4 | Yarrow |
| deca-2E,4E,8Z-trienoic acid piperidide | RBP4 | Yarrow |
| deca-2E,4E-dienoic acid piperidide | RBP4 | Yarrow |
| deca-2E,4E-dienoic acid tyramide | MGAM; RBP4 | Yarrow |
| dehydroaromadendrene | RBP4 | Basil |
| dehydrocostunolide | NR5A2; RBP4 | Bay leaves |
| dehydrocostus lactone | RBP4 | Bay leaves |
| dehydrocurdione | RBP4 | Turmeric |
| dehydrodieugenol | MGAM | Clove |
| dehydropiperonaline | AKR1B1; AMY2A; FBP1; GCK; MGAM; NR5A2; PPARA; RBP4; RXRA | Black pepper |
| dehydroretrofractamide C | RBP4 | Black pepper |
| delta-5-avenasterol (Isofucosterol) | AMY2A; HSD11B1; MGAM; NR5A2 | Caraway |
| delta-7-avenasterol | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARG | Caraway |
| demethoxy-6-gingerol | RBP4 | Ginger |
| demethoxy-6-shogaol | RBP4 | Ginger |
| desacetylmatricarin | RBP4 | Yarrow |
| desmethoxycurcumin | AKR1B1; AMY2A; MGAM; NR5A2; RBP4 | Turmeric |
| desmethylxanthohumol | MGAM; PPARA; RBP4; RXRA | Hops |
| diacetoxy-6-gingerdiol | RBP4 | Ginger |
| dicumylperoxide | RBP4 | Turmeric |

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| didymin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9 | Oregano |
| di-epi-cedrene | NR5A2 | Aniseed; clove; cumin; turmeric |
| dihydro-ar-turmerone | RBP4 | Turmeric |
| dihydroguaiaretic acid | MGAM | Mace |
| dihydrokaempferol-7-O-B-D-glucopyranoside | AMY2A; DPP4; FBP1; MGAM; PTPN9 | Saffron |
| dihydropipericide | PPARA | Black pepper |
| dihydroxyxanthohumol | AKR1B1; MGAM | Hops |
| dioscin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9 | Fenugreek |
| diosgenin | AMY2A; HSD11B1; MGAM; NR5A2 | Fenugreek |
| diosmetin | MGAM; RBP4 | Yarrow |
| diosmetin-7-O-B-D-glucopyranoside | AMY2A; DPP4; FBP1; MGAM; PTPN9 | Parsley |
| echinatin | MGAM; RBP4 | Liquorice |
| eicosapentaenoic acid | RBP4 | Ginger |
| ellagic acid | PPARA; PTPN9; RBP4 | Aniseed; clove; dill; lemon balm; sage |
| emodin | AMY2A; PPARA; RBP4 | Liquorice |
| epicatechin | AMY2A; MGAM; NR5A2; RBP4 | Cinnamon; cumin; dill; hops; lemon balm; nutmeg; oregano; rosemary; sage; thyme |
| epicatechin gallate | AMY2A; DPP4; INSR; MGAM; NR5A2; PPARA; PYGL | Aniseed; hops |
| epigallocatechin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK1; PPARG; PTPN9 | Lemon balm; oregano; thyme |

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| epigallocatechin gallate | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK1; PPARG; PTPN9 | Sage |
| epiisorosmanol | MGAM | Rosemary |
| epiprocurcumenol | RBP4 | Turmeric |
| epirosmanol | DPP4; MGAM | Rosemary; sage |
| epirosmanol ester of 12-O-methylcarnosic acid | AMY2A | Sage |
| eremanthin | NR5A2; RBP4 | Bay leaves |
| eremophilene | RBP4 | Bay leaves |
| eriodictin | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL | Fennel; sage |
| eriodictyol | MGAM; PPARA; RBP4 | Oregano; rosemary; thyme |
| eriodictyol-7-O-glucoside | AMY2A; FBP1; MGAM; PPARA; PTPN9 | Lemon balm |
| estra-1,3,5(10)-trien-17b-ol | AMY2A; MGAM; NR5A2; RBP4 | Ginger |
| ethyl iso-allocholate | MGAM | Lemon balm |
| euchrenone A5 | AKR1B1; AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PPARG; PYGL | Liquorice |
| eudesmol acetate | RBP4 | Bay leaves |
| eugeniin | AKR1B1; AMY2A; DPP4; FBP1; INSR; MGAM; PDK2; PPARA; PTPN9; PYGL | Clove |

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| eugenol-4-O-B-D-(6-O-galloyl)glucopyranoside | MGAM; NR5A2; PDK2; PPARA; PTPN9 | Allspice |
| fenretinide | MGAM; PPARA | Ginger |
| fenugreekine | DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL | Fenugreek |
| fenugrin A | AKR1B1; RBP4; RXRA | Fenugreek |
| ferruginol | AMY2A; MGAM; RBP4 | Sage |
| flavone | AMY2A; MGAM; NR5A2; PPARA; RBP4; RXRA | Cumin |
| foeniculoside I | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARD; PTPN9; PYGL | Fennel |
| foeniculoside II | MGAM; PDK2 | Fennel |
| foeniculoside III | AMY2A; DPP4; MGAM; PDK2; PPARA | Fennel |
| foeniculoside IV | DPP4; MGAM | Fennel |
| foeniculoside VI | MGAM | Fennel |
| foeniculoside VIII | MGAM | Fennel |
| foeniculoside X | MGAM; NR5A2 | Fennel |
| foeniculoside XI | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Fennel |
| folic acid | AMY2A; DPP4; FBP1; MGAM; PDK2; PPARA; PTPN9; RBP4 | Fenugreek; ginger |
| formononetin | RBP4 | Liquorice |
| galbacin | AMY2A; MGAM; NR5A2; PDK2; PPARA | Nutmeg |

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| gallocatechin | MGAM | Rosemary |
| gancaonin L | AMY2A; DPP4; HSD11B1; MGAM; RBP4 | Liquorice |
| gardenin B | RBP4 | Thyme |
| gazaniolide | NR5A2; RBP4 | Bay leaves |
| g-cadinene | RBP4 | Allspice; basil; bay leaves; cardamom; clove; dill; lemongrass; oregano; rosemary; sage; thyme; yarrow |
| gemin D | AMY2A; DPP4; MGAM; PDK2; PTPN9; PYGL | Clove |
| genistein | AMY2A; PPARA; RBP4 | Liquorice |
| genkwanin | AMY2A; MGAM; NR5A2; RBP4 | Liquorice; rosemary; sage; thyme |
| geraniyllinalool | RBP4 | Lemon balm; turmeric |
| germacra-4(15),5,10(14)-trien-1a-ol | RBP4 | Clove |
| germacrene A | RBP4 | Basil; bay leaves |
| germacrene B | RBP4 | Black pepper; caraway; thyme |
| germacrene D | NR5A2 | Allspice; aniseed; basil; bay leaves; black pepper; caraway; cardamom; clove; cumin; dill; ginger; lemon balm; lemongrass; nutmeg; oregano; parsley; rosemary; thyme; turmeric; yarrow |
| germacrone | PPARA; RBP4 | Lemon balm; turmeric |
| g-gurjunen epoxide | RBP4 | Turmeric |
| g-gurjunene | RBP4 | Bay leaves; black pepper |
| g-himachalene | RBP4 | Aniseed; dill; turmeric |
| giganteone A | AKR1B1; AMY2A; MGAM; NR5A2; PDK2; PPARA | Nutmeg |

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| giganteone C | AKR1B1; MGAM; NR5A2; PPARA | Nutmeg |
| gitogenin | AMY2A; DPP4; HSD11B1; MGAM; NR5A2 | Fenugreek |
| gitoxigenin | AMY2A; MGAM; NR5A2; PDK2; PTPN9 | Turmeric |
| glabranin | AMY2A; MGAM; NR5A2; PPARA; PTPN9; RBP4 | Liquorice |
| glabrene | AMY2A; DPP4; MGAM; NR5A2; PDK2; PPARA; PTPN9; RBP4 | Liquorice |
| glabric acid | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Liquorice |
| glabridin | AKR1B1; AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2 | Liquorice |
| glabrocoumarin | AKR1B1; AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL; RBP4 | Liquorice |
| glabrol | AMY2A; DPP4; INSR; MGAM; NR5A2; PDK2; PPARA; PPARG; RBP4; RXRA | Liquorice |
| glabrolide | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Liquorice |

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| glabrone | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA | Liquorice |
| glicoricone | MGAM | Liquorice |
| glisoflavone | AMY2A; DPP4; MGAM | Liquorice |
| glucoliquiritin apioside | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PTPN9 | Liquorice |
| glyasperin C | RBP4 | Liquorice |
| glyasperin D | PPARA | Liquorice |
| glyasperin F | AMY2A; DPP4; MGAM; NR5A2; PPARA; PTPN9; RBP4 | Liquorice |
| glycerol-1-O-A-D-glucuronide-3-O-benzoyl-ester | MGAM | Cumin |
| glycycomarin | AKR1B1; AMY2A; MGAM; PPARA; PTPN9; RBP4 | Liquorice |
| glycycumarin | AKR1B1; PPARA; RBP4 | Liquorice |
| glycyrin | PPARA | Liquorice |
| glycyrol | AMY2A; MGAM; NR5A2; PPARA; PTPN9 | Liquorice |
| glycyroside | FBP1; MGAM; NR5A2; PYGL | Liquorice |
| glycyrrhetic acid | AMY2A; FBP1; MGAM; PTPN9; PYGL | Liquorice |
| glycyrrhetic acid | AMY2A; DPP4; MGAM; NR5A2; PTPN9 | Liquorice |

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| glycyrrhetol | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2 | Liquorice |
| glycyrrhisoflavon | AMY2A; DPP4; HSD11B1; MGAM; PPARA; PYGL; RBP4 | Liquorice |
| glycyrrhizin | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| glyinflanin G | AMY2A; DPP4; FBP1; FFAR1; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Liquorice |
| glyinflanin H | AMY2A; DPP4; MGAM; NR5A2; RBP4 | Liquorice |
| glyzaglabrin | AMY2A; MGAM; NR5A2; RBP4 | Liquorice |
| g-muurolene | RBP4 | Allspice; basil; black pepper; cardamom; clove; ginger; lemongrass; oregano; thyme; yarrow |
| graveolone | PPARA; RBP4 | parsley |
| g-sitosterol | NR5A2 | Cardamom |
| g-terpinene | MGAM | Allspice; basil; bay leaves; black pepper; caraway; cardamom; clove; cumin; dill; fennel; ginger; hops; marjoram; nutmeg; oregano; parsley; rosemary; sage; star anise; thyme; turmeric; yarrow |
| g-tocopherol | PPARA | Cardamom; ginger; paprika |
| guineensine | PPARA | Black pepper |

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| harman | RBP4 | Saffron |
| hesperetin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL | Cumin; dill; lemon balm; rosemary |
| hesperidin | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Dill; fennel; lemon balm; marjoram; rosemary; thyme |
| himachalene epoxide | RBP4 | Liquorice |
| hispaglabridin A | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9 | Liquorice |
| hispaglabridin B | AKR1B1; AMY2A; DPP4; FBP1; FFAR1; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG | Liquorice |
| hispidulin | MGAM; RBP4 | Rosemary; sage; thyme |
| hispidulin glucuronide | AMY2A; MGAM; PDK2; PTPN9 | Sage |
| hispidulin rutinoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PTPN9 | Rosemary |
| homocapsaicin | MGAM | Paprika |
| homoplantaginin | AMY2A; MGAM; PDK2; PTPN9 | Rosemary; sage |
| hop-17(21)-en-3b-ol | AKR1B1; AMY2A; HSD11B1; MGAM; | Hops |

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| | NR5A2; PDK2; PPARD; PTPN9 | |
| hop-17(21)-en-3b-yl acetate | AMY2A; MGAM; NR5A2; PDK2; PPARD | Hops |
| hopenone I | AKR1B1; AMY2A; FBP1; HSD11B1; MGAM; NR5A2; PPARD; PTPN9; PYGL | Hops |
| humulone | MGAM; NR5A2 | Hops |
| humulusol | AMY2A; DPP4; MGAM; PPARA; PPARD; PPARG | Hops |
| hyperoside | MGAM; NR5A2 | Allspice; black pepper; fennel; star anise |
| icaraside D1 | FBP1; MGAM; PTPN9 | Aniseed |
| icaraside D2 | RBP4 | Aniseed |
| illicinole | RBP4 | Star anise |
| imperatorin | AMY2A; MGAM; NR5A2; PPARA; RBP4 | Parsley |
| isoangustone A | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9 | Liquorice |
| isocaryophyllene | RBP4 | Black pepper; dill; thyme |
| isochavicine | MGAM; NR5A2; PPARA; RBP4; RXRA | Black pepper |
| isoglabrolide | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARD; PTPN9; PYGL | Liquorice |
| isoglycyrol | AMY2A; DPP4; FBP1; HSD11B1; MGAM; | Liquorice |

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| | NR5A2; PPARA; PPARD; PPARG; PYGL | |
| isoimperatorin | AMY2A; MGAM; NR5A2; RBP4 | parsley |
| isolariciresinol-3a-O-B-D-glucopyranoside | MGAM | Sage |
| isoliquiritigenin | MGAM; RBP4 | Liquorice |
| isoliquiritin | AMY2A; DPP4; MGAM; PPARA | Liquorice |
| isoliquiritin apioside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PTPN9 | Liquorice |
| isolongifolene-4,5,9,10-dehydro | RBP4 | Lemongrass |
| isoorientin | AMY2A; DPP4; FBP1; MGAM | Aniseed; fenugreek; lemongrass; yarrow |
| isoorientin 2 -O-rhamnoside | AMY2A; DPP4; FBP1; MGAM; PTPN9 | Lemongrass |
| isopaulitin | NR5A2; RBP4 | Yarrow |
| isopiperine | AKR1B1; NR5A2; PPARA; RBP4; RXRA | Black pepper |
| isopiperolein B | AKR1B1; NR5A2; PPARA; RBP4 | Black pepper |
| isoprocurcumenol | RBP4 | Turmeric |
| isopulegol | MGAM; NR5A2; RBP4 | Hops; rosemary Caraway; cinnamon; fennel; parsley; |
| isorhamnetin | AMY2A; MGAM; RBP4 | rosemary |
| isorhamnetin-3-O-galactoside | MGAM; PPARA | Fennel |
| isorhamnetin-3-O-glucoside | MGAM; NR5A2; PTPN9 | Fennel; rosemary |
| isorhamnetin-3-O-glucuronide | MGAM; PTPN9; PYGL | Fennel; dill |

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| isorhamnetin-3-O-rutinoside | AMY2; DPP4; FBP1; MGAM; PDK2; PPARD; PTPN9; PYGL | Black pepper; fennel |
| isorosmanol | MGAM | Rosemary |
| isosakuranetin | PPARA | Rosemary |
| isoschaftoside | AMY2A; FBP1; MGAM; PPARA; PYGL | Lemongrass; liquorice |
| isoscoparin | AMY2A; FBP1; PPARG | Lemongrass |
| isoviolanthin | AMY2A; DPP4; MGAM; PPARA; PYGL | Liquorice |
| isovitexin | AMY2A; FBP1; MGAM | aniseed; fenugreek; liquorice |
| isoxanthohumol | AMY2A; MGAM; NR5A2; PPARA; RBP4 | hops |
| ispaglabridin B | AMY2A; DPP4; FBP1; FFAR1; HSD11B1; INSR; MGAM; NR5A2; PPARA; PPARD; PPARG | Liquorice |
| kaempferide-3-O-glucuronide | FBP1; MGAM | Oregano |
| kaempferol | MGAM; PPARA; RBP4 | Bay leaves; black pepper; cinnamon; clove; dill; fennel; fenugreek; hops; lemon balm; lemongrass; oregano; rosemary; saffron; star anise; thyme |
| kaempferol-3,7,4'-tri-O-B-glucopyranoside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PTPN9 | Saffron |
| kaempferol-3,7-dirhamnopyranoside | AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; NR5A2; PPARA; PPARD; PTPN9 | Bay leaves |

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| kaempferol-3-O-a-L-(2"-E-p-coumaroyl)rhamnoside | AKR1B1; AMY2A; DPP4; FBP1; GCK; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9 | Bay leaves |
| kaempferol-3-O-a-L-(2-O-B-D-glucopyranosyl)rhamnoperanoside-7-O-B-D-(6-O-acetyl)glucopyranoside | AMY2A; DPP4; HSD11B1; MGAM; NR5A2 | Saffron |
| kaempferol-3-O-a-L-(2-O-B-D-glucopyranosyl)rhamnopyranoside-7-O-B-D-glucopyranoside | AMY2A; HSD11B1; MGAM; NR5A2; PPARA | Saffron |
| kaempferol-3-O-a-L-(3",4"-di-(E)-p-coumaroyl)rhamnoside | AKR1B1; AMY2A; DPP4; FBP1; GCK; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Bay leaves |
| kaempferol-3-O-alpha-L-(2",3"-di-E-P-coumaroyl)-rhamnoside | AMY2A; DPP4; GCK; MGAM; NR5A2; PDK2; PPARA; PPARD; PTPN9; PYGL | Fennel |
| kaempferol-3-O-arabinopyranoside | MGAM | Bay leaves |
| kaempferol-3-O-arabinoside-7-rhamnoside | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PPARA; PPARD | Black pepper |
| kaempferol-3-O-B-D-(2-O-B-D-acetylglucosyl)glucopyranoside | NR5A2 | Saffron |
| kaempferol-3-O-B-D-glucopyranosyl-(1-2)-O-B-D-glucopyranoside-7-O-B-D-glucopyranoside | AMY2A; DPP4; MGAM | Saffron |
| kaempferol-3-O-galactoside | MGAM | Star anise |

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| kaempferol-3-O-glucoside (astralagin) | MGAM; PTPN9; PYGL | Bay leaves; black pepper; caraway; cumin; dill; fennel; parsley; saffron; star anise; |
| kaempferol-3-O-glucuronide | MGAM; NR5A2 | Dill; fennel |
| kaempferol-3-O-rhamnoside | MGAM; NR5A2 | Bay leaves |
| kaempferol-3-O-rutinoside (nictoflorin) | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARG; PTPN9; PYGL | Cumin; fennel; star anise |
| kaempferol-3-O-sophoricoside-7-O-B-D-glucopyranoside | AMY2A; FBP1; MGAM; NR5A2; PPARA | Saffron |
| kaempferol-7-O-B-D-glucopyranoside (populnin) | AMY2A; FBP1; MGAM; PDK2; PPARA; PTPN9 | Saffron |
| kaempferol-7-O-B-D-sophoroside | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PTPN9 | Saffron |
| kanzonol H | AMY2A; DPP4; HSD11B1; MGAM; NR5A2 | Liquorice |
| kanzonol U | AMY2A; MGAM; NR5A2; PDK2; PTPN9; RBP4 | Liquorice |
| kanzonol V | AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; PPARA; PPARG; PTPN9; PYGL | Liquorice |

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| kanzonol W | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2 | Liquorice |
| kanzonol X | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9 | Liquorice |
| kanzonol Y | AMY2A; DPP4; MGAM; NR5A2; PPARA | Liquorice |
| kumatakenin | AMY2A | Liquorice |
| kurilensin A | AMY2A; MGAM; NR5A2; PYGL | Lemongrass |
| ladanein | AMY2A; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9; RBP4 | Rosemary |
| lauroside C | MGAM | Bay leaves |
| ledol | RBP4 | Caraway; clove |
| licarin B | AMY2A; DPP4; MGAM; NR5A2; PDK2; PYGL | Nutmeg |
| licoagrocarpin | AKR1B1; AMY2A; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Liquorice |
| licochalcone A | RBP4 | Liquorice |
| licochalcone B | RBP4 | Liquorice |
| licocoumarin A | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PPARA; PPARG; PTPN9 | Liquorice |
| licocoumarone | MGAM | Liquorice |

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| licoflavanone A | AMY2A; DPP4; MGAMNR5A2; PDK2; PPARA | Liquorice |
| licoflavone B | AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; NR5A2; PPARA; PPARG; PYGL | Liquorice |
| licoflavonol | AMY2A; DPP4; MGAM; PPARA | Liquorice |
| licoisoflavanon | AMY2A; DPP4; HSD11B1; MGAM; NR5A2 | Liquorice |
| licoisoflavone A | AMY2A; MGAM; NR5A2; PPARA | Liquorice |
| licoisoflavone B | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PPARA | Liquorice |
| licoricidin | AMY2A; DPP4; MGAM; NR5A2; PPARA; PPARG | Liquorice |
| licoricone | AMY2A; MGAM; NR5A2; PPARA | Liquorice |
| licoriphenone | AKR1B1; MGAM; PPARA | Liquorice |
| licuraside | AMY2A; FBP1; MGAM; PTPN9 | Liquorice |
| licuroside | AMY2A; FBP1; MGAM; NR5A2; PTPN9 | Liquorice |
| lilyn | AMY2A; FBP1; MGAM | Fenugreek |

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| limonin | AMY2A; MGAM; PTPN9 | Clove |
| linderol | AMY2A; GCK; MGAM; NR5A2; PPARA; PPARD; PTPN9 | Caraway |
| linolenic acid | RBP4 | Aniseed; basil; black pepper; caraway; cardamom; cinnamon; cumin; dill; fenugreek; ginger; lemon balm; nutmeg; paprika; turmeric |
| liqcoumarin | RBP4 | Liquorice |
| liquiritigenin | AMY2A; NR5A2; PPARA; RBP4 | Liquorice |
| liquiritin | AMY2A; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG | Liquorice |
| liquiritin apioside | AMY2A; DPP4; HSD11B1; MGAM; NR5A2; PYGL | Liquorice |
| liquoric acid | AMY2A; DPP4; FBP1; MGAM; PTPN9; PYGL | Liquorice |
| liquorice glycoside A | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9 | Liquorice |
| liquorice glycoside B | AMY2A; DPP4; MGAM; NR5A2; PDK2; PPARD; PPARG; PTPN9 | Liquorice |
| liquorice glycoside C1 | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; | Liquorice |

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| | PPARA; PPARD; PTPN9; PYGL | |
| liquorice glycoside C2 | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Liquorice |
| liquorice glycoside D1 | AMY2A; DPP4; GCK; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Liquorice |
| liquorice glycoside D2 | AKR1B1; AMY2A; DPP4; FBP1; GCK; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Liquorice |
| liquorice saponin A3 | AMY2A; DPP4; FBP1; MGAM; PTPN9 | Liquorice |
| liquorice saponin B2 | AMY2A; DPP4; FBP1; INSR; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| liquorice saponin C2 | AMY2A; DPP4; FBP1; INSR; MGAM; PPARA; PTPN9; PYGL | Liquorice |
| liquorice saponin D3 | AMY2A; DPP4; FBP1; INSR; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| liquorice saponin E2 | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PTPN9; PYGL | Liquorice |

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| liquorice saponin F3 (rha) | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PPARA; PTPN9 | Liquorice |
| liquorice saponin G2 | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9 | Liquorice |
| liquorice saponin H2 | AMY2A; DPP4; FBP1; MGAM; PTPN9; PYGL | Liquorice |
| liquorice saponin J2 | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9 | Liquorice |
| liquorice saponin K2 | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| liquorice saponin L3 (Rha) | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9 | Liquorice |
| lithospermic acid A | AMY2A; DPP4; GCK; HSD11B1; MAGM; NR5A2; PDK2; PYGL | Basil; lemon balm; marjoram; oregano; thyme |
| lupeol | AMY2A; NR5A2 | Lemon balm; sage |
| lupulone | MGAM; NR5A2 | Hops |
| lupulone derivative 10 | MGAM; NR5A2 | Hops |
| lupulone derivative 9 | AMY2A; MGAM; NR5A2 | Hops |
| luteolin | AMY2A; MGAM; NR5A2; RBP4 | Cumin; dill; fenugreek; hops; lemon balm; lemongrass; oregano; parsley; rosemary; sage; thyme; yarrow |
| luteolin 2 -O-deoxyosyl-6-C-(6-deoxy-pento-hexos-ulosyl) | AMY2A; DPP4; FBP1; MGAM; NR5A2; PPARG; PTPN9; PYGL | Lemongrass |
| luteolin-3'-O-(3"-O-acetyl)-B-D-glucuronide | AMY2A; FBP1; HSD11B1; MGAM; | rosemary |

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| | NR5A2; PPARA; PTPN9 | |
| luteolin-3-O-B-D-glucuronide | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9 | Lemon balm; rosemary; sage |
| luteolin-4-O-glucoside | AMY2A; DPP4; FBP1; INSR; MGAM; PPARG | Yarrow |
| luteolin-6,8-di-C-glucoside (lucenin-2) | FBP1; MGAM | Marjoram |
| luteolin-6-C-glucoside | AMY2A; MGAM; NR5A2; PDK2; PPARG | Aniseed; lemongrass |
| luteolin-7-B-glucuronide | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9 | Lemon balm; oregano; rosemary; sage; yarrow |
| luteolin-7-O-b-D-glucopyranoside-3'-O-b-D-glucuronopyranoside | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PTPN9 | Lemon balm |
| luteolin-7-O-b-D-glucuronopyranoside | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PDK2; PPARA; PTPN9 | Aniseed; cumin; fenugreek; lemon balm; lemongrass; marjoram; oregano; rosemary; sage; thyme; yarrow |
| luteolin-7-O-neohesperidoside | AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARG; PTPN9; PYGL | Lemongrass |
| luteolin-7-O-rutinoside | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PPARG; PTPN9; PYGL | Fennel; marjoram; rosemary; sage; thyme |

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| | AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Sage; thyme |
| luteolin-diglucuronide | | |
| lyoniside | AMY2A; MGAM | Bay leaves |
| | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Liquorice |
| macedonoside A | | |
| | AMY2A; DPP4; FBP1; INSR; MGAM; PTPN9; PYGL | Liquorice |
| macedonoside B | | |
| | AMY2A; DPP4; FBP1; INSR; MGAM; NRA52; PDK2; PPARA; PTPN9; PYGL | Liquorice |
| macedonoside C | | |
| malabaricone B | PPARA; RBP4 | Nutmeg |
| malabaricone C | PPARA; RBP4 | Nutmeg |
| | AMY2A; FBP1; HSD11B1; INSR; MGAM; NR5A2; PPARA; PTPN9; PYGL | Parsley |
| malonylapiin | | |
| | AMY2A; DPP4; MGAM; NR5A2; PPARA; PTPN9 | Saffron |
| mangicrocin | | |
| manool | RBP4 | Sage |
| | AMY2A; MGAM; NR5A2; PDK2; PPARA | Sage |
| martynoside | | |
| m-coumaric acid | MGAM | Fenugreek; lemon balm |
| medioresinol | AMY2A | Cinnamon; rosemary |

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| melitric acid A | AMY2A; DPP4; MGAM; NR5A2; PDK2; PPARA; PPARG | Lemon balm |
| melitric acid B | AMY2A; GCK; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Lemon balm |
| methyl achimillate B | RBP4 | Yarrow |
| methyl achimillate C | RBP4 | Yarrow |
| methyl carnosate | MGAM | Rosemary; sage |
| methyl rosmarinate | AKR1B1; MGMA; PPARA; RBP4 | Marjoram; rosemary; thyme |
| micromeric acid | AMY2A; MGAM | Rosemary |
| miltirone | MGAM; NR5A2; RBP4 | Rosemary |
| morachalcone A | AKR1B1; AMY2A; MGAM; RBP4; RXRA | Liquorice |
| myricetin | MGAM; PPARA; RBP4 | Allspice; clove; dill; fenugreek; lemon balm; lemongrass; rosemary |
| myricetin-3-O-galactoside | AMY2A; MGAM; PTPN9 | Allspice |
| myricetin-3-O-glucoside | MGAM; NR5A2 | Oregano |
| n-(2,4-dinitrophenyl)-N-13-(2,6,6-trimethyl-cyclohex-1-enyl)propylidene | MGAM; RBP4 | Ginger |
| naphthalene,1,2,3,4,4a,5,6,8a-octahydro-4a,8-dimethyl-2-(1-methylethylidene) (Eudesma-3,7(11)-diene) | RBP4 | Ginger; turmeric |
| naringenin | AMY2A; MGAM; RBP4 | Dill; fennel; fenugreek; lemon balm; oregano; rosemary; thyme |
| naringenin-7-O-glucoside (Prunin) | AMY2A; DPP4; FBP1; MGAM; NR5A2; PTPN9 | Fenugreek; liquorice |

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| naringin | AMY2A; DPP4; HSD11B1; MGAM; PDK2; PYGL | Aniseed; lemon balm; thyme |
| narirutin | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARG; PPARG; PTPN9; PYGL | Fennel; fenugreek |
| nectandrin B | MGAM | Nutmeg |
| neochlorogenic acid | MGAM | Aniseed; caraway; cumin; dill; fennel; lemongrass; oregano; thyme; yarrow |
| neoisoliquiritin | AKR1B1; AMY2A; FBP1; MGAM; PPARA; PTPN9 | Liquorice |
| neolicuroside | AMY2A; DPP4; FBP1; MGAM; NR5A2; PTPN9; PYGL | Liquorice |
| neoliquiritin | AMY2A; DPP4; FBP1; MGAM; PTPN9 | Liquorice |
| neophytadiene | AKR1B1; AMY2A; FFAR1; MGAM; NR5A2; PPARA; PPARG; RBP4 | Aniseed; bay leaves; dill; thyme |
| neotigogenin | AMY2A; DPP4; HSD11B1; NR5A2 | Fenugreek |
| nepitrin | AMY2A; MGAM; PPARA; PTPN9 | Rosemary |
| nerolidyl propionate | RBP4 | Turmeric |
| N-feruloyltyramine | MGAM; RBP4 | Black pepper |
| nookatin | RBP4 | Clove |
| oleanolic_acid | AMY2A; FBP1; HSD11B1; | Clove; fennel; lemon balm; rosemary; sage |

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| | MGAMNR5A2; PDK2; PTPN9 | |
| ombutin-3-O-B-D-glucopyranoside | AMY2A; MGAM | Clove |
| O-methylshinpterocarpin | AMY2A; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG | Liquorice |
| ononin | AMY2A; FBP1; MGAM; PPARA | Liquorice |
| orientin | AMY2A; INSR; NR5A2; PPARA; PTPN9 | Fenugreek; lemongrass |
| origanoside | PPARA | Oregano |
| osthol | RBP4 | Dill |
| oxypeucedanin | RBP4 | Dill; parsley |
| oxypeucedanin hydrate | NR5A2; RBP4 | Dill; parsley |
| paulitin | NR5A2; RBP4 | Yarrow |
| p-coumaric-acid-4-glucoside | MGAM | Parsley |
| p-coumaric-acid-4-O-(2'-O-B-D-apiofuranosyl)-B-D-glucopyranoside | MGAM | Sage |
| p-cymen-7-ol | MGAM | Bay leaves; oregano; thyme |
| p-cymen-9-ol | MGAM | Dill; rosemary |
| p-Cymene | MGAM | Allspice; basil; black pepper; caraway; cardamom; cinnamon; clove; cumin; dill; fennel; hops; marjoram; nutmeg; oregano; parsley; rosemary; sage; star anise; thyme; turmeric; yarrow |
| p-cymenene | MGAM | Rosemary |
| pectolarigenin | AKR1B1; AMY2A; DPP4; FBP1; HSAD11B1; MGAM; NR5A2; PPARA; RBP4 | Rosemary |
| peonidin-3-O-glucoside | MGAM | Bay leaves |

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| peonidin-3-O-rutinoside | AMY2A; DPP4; FBP1; MGAM; PDK2; PPARA; PTPN9; PYGL | Bay leaves |
| pergumidiene | PPARA | Black pepper |
| phaeophytin A | NR5A2; PPARA | Dill |
| phaeophytin B | AMY2A; PPARA | Dill |
| phaseollinisoflavan | AMY2A; DPP4; HSD11B1; NR5A2; PDK2; PPARA | Liquorice |
| phenylacetic acid | MGAM | Black pepper; saffron |
| Phenylpropanoid glucoside derivative | FBP1; MGAM; PPARA | Star anise |
| phlorizin | AMY2A; MGAM; NR5A2; PDK2 | Fenugreek |
| p-hydroxybenzoic acid-O-glucoside | RBP4 | Fennel |
| phytadiene | RBP4 | Bay leaves |
| picein | RBP4 | Sage |
| pimentol | DPP4; MGAM; PPARA | Allspice |
| pinocembrin | MGAM; NR5A2; RBP4 | Liquorice |
| piperamine | MGAM; NR5A2; RBP4 | Black pepper |
| piperanine | AKR1B1; MGAM; NR5A2; PPARA; RBP4 | Black pepper |
| piperchabamide | RBP4 | Black pepper |
| pipericyclobutanamide A | AKR1B1; AMY2A; DPP4; FBP1; GCK; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Black pepper |
| pipericyclobutanamide B | AKR1B1; AMY2A; DPP4; FBP1; GCK; INSR; MGAM; NR5A2; | Black pepper |

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| | PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | |
| piperettine | MGAM; NR5A2; PPARA | Black pepper |
| pipericide | PPARA | Black pepper |
| piperine | MGAM; RBP4 | Black pepper; ginger |
| piperolein A | AKR1B1; PPARA; RBP4; RXRA | Black pepper |
| piperolein B | AKR1B1; MGAM; NR5A2; PPARA; RBP4; RXRA | Black pepper |
| piperylin | MGAM; RBP4 | Black pepper |
| p-menthane-2,6,8,9-tetrol-9-glucoside | FBP1; MGAM | Caraway |
| postlupulone | MGAM; NR5A2 | Hops |
| prehumulone | MGAM; NR5A2 | Hops |
| prelupulone | MGAM; NR5A2 | Hops |
| prenyllicoflavone A | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG | Liquorice |
| procurcumenol | RBP4 | Turmeric |
| procyanidin B2 | AMY2A; HSD11B1; MGAM; PDK2; PTPN9 | Cinnamon |
| prunetin | AMY2A; PPARA; RBP4 | Liquorice |
| psilostachyin C | NR5A2; PTPN9; RBP4 | Yarrow |
| psoralen | RBP4 | Parsley |
| pyrethrin I | MGAM; RBP4 | Yarrow |
| quercetin | AMY2A; MGAM; NR5A2; PPARA; RBP4 | Allspice; aniseed; black pepper; cinnamon; clove; cumin; dill; fennel; fenugreek; hops; lemon balm; |

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| | | lemongrass; marjoram; oregano; parsley; rosemary; saffron; sage; star anise; thyme; yarrow |
| quercetin 3-(2Gal-rhamnosyl-robinobioside) | AMY2A; DPP4; FBP1; MGAM; PDK2; PPARA; PTPN9 | Turmeric |
| quercetin 3-rhamnosyl-(1 -2)-rhamnoside | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Turmeric |
| quercetin-3-O-(2-O-galloyl)-B-D-glucoside | AMY2A; DPP4; MGAM; PDK2; PTPN9; PYGL | Allspice |
| quercetin-3-O-a-L-arabinoside (avicularin) | MGAM; PDK2 | Allspice |
| quercetin-3-O-B-D-glucuronide-6"-methyl-ester | MGAM; NR5A2; PTPN9 | Allspice |
| quercetin-3-O-caffeoylglucoside | AKR1B1; AMY2A; DPP4; FBP1; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | Caraway |
| quercetin-3-O-galactoside (hyperoside) | AMY2A; MGAM | Allspice; black pepper; fennel; star anise |
| quercetin-3-O-glucoside (isoquercitrin) | AMY2A; MGAM; NR5A2 | Bay leaves; black pepper; caraway; cumin; dill; fennel; lemon balm; liquorice; oregano; star anise; thyme |
| quercetin-3-O-rhamnoside | AMY2A; INSR; MGAM; NR5A2 | Bay leaves; black pepper; star anise; turmeric |
| quercetin-3-O-xyloside | AMY2A; DPP4; FBP1; MGAM; PDK2; | Star anise |

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| | PPARA; PPARG; PTPN9; PYGL | |
| quercetin-7-O-glucoside | AMY2A; FBP1; MGAM; PPARG; PPARG; PTPN9 | Oregano; sage; thyme |
| quercetin-7-O-methyl | AKR1B1; AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PPARA; PTPN9; RBP4 | Oregano |
| quercetin-O-glucuronide (miquelianin) | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL | Allspice; aniseed; caraway; dill; fennel |
| quercitrin | AMY2A; INSR; MGAM; NR5A2; PTPN9 | Hops; lemongrass |
| rel-(5S,6S,7R,10R,12S,13R)-7-hydroxyapiana-8,14-diene-11,16-dion-(22,6)-olide | MGAM; NR5A2 | sage |
| rel-(5S,6S,7S,10R,12S,13R)-7-hydroxyapiana-8,14-diene-11,16-dion-(22,6)-olide | AMY2A; NR5A2 | sage |
| retrofractamide A | AKR1B1; NR5A2; PPARA; RBP4 | Black pepper |
| rhamnetin | AMY2A; MGAM; RBP4 | allspice; clove |
| rhamnetin-O-triglucoside | AMY2A; DPP4 | Black pepper |
| rhamnocitrin | AMY2A; RBP4 | Clove; lemon balm |
| rosmanol | MGAM | Rosemary; sage |
| rosmaridiphenol | MGAM; NR5A2 | Rosemary |
| rosmarinic acid | AKR1B1; MGAM; PPARA; PTPN9; RBP4 | Aniseed; basil; black pepper; caraway; cinnamon; cumin; dill; fennel; lemon balm; lemongrass; marjoram; oregano; rosemary; sage; thyme; yarrow |

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| rosmarinic-acid-3-O-glucoside | DPP4; HSD11B1; MGAM; PPARA; PTPN9 | Rosemary; thyme |
| rutin | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Aniseed; basil; black pepper; cinnamon; cumin; dill; fennel; fenugreek; hops; lemon balm; marjoram; oregano; rosemary; sage; star anise; thyme; turmeric; yarrow |
| sagecoumarin | AMY2A; DPP4; FBP1; FFAR1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG | Sage |
| sageone | MGAM; RBP4 | Sage |
| sagequinone methide A | MGAM | Sage |
| sagerinic acid | AKR1B1; AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARG; PTPN9; PYGL | Lemon balm; sage |
| sakuranetin | PPARA | Thyme |
| salofficinoid E | MGAM; PPARA; RBP4 | Sage |
| salofficinoid G | NR5A2 | Sage |
| salofficinoid H | RBP4 | Sage |
| salvianolic acid A | AKR1B1; AMY2A; MGAM; NR5A2; PDK2; PPARA; PPARG | Lemon balm |
| salvianolic acid B | AMY2A; DPP4; FBP1; HSD11B1; MGAM; PDK2; PPARA; | Lemon balm; sage |

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| | PPARD; PPARG; PTPN9; PYGL | |
| salvianolic acid C | AMY2A; DPP4; FBP1; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PYGL | Lemon balm |
| salvianolic acid F | AMY2A; MGAM; RBP4 | Lemon balm |
| salvianolic acid K | AMY2A; DPP4; FBP1; MGAM; PPARA; PPARG; PYGL | Thyme |
| salvianolic acid L | AMY2A; DPP4; MGAM; NR5A2; PPARA; PPARD; PTPN9 | sage |
| santamarin | NR5A2; RBP4 | Bay leaves |
| saponarin | AMY2A; MGAM; NR5A2 | Sage |
| sarcaglaboside D | AMY2A; HSD11B1; NR5A2; PTPN9 | Liquorice |
| sarsasapogenin | AMY2A; DPP4; HSD11B1; NR5A2 | Fenugreek |
| saussurea lactone | RBP4 | Yarrow |
| saxalin | RBP4 | Parsley |
| schaftoside | AMY2A; DPP4; FBP1; MGAM | Liquorice; yarrow |
| scutellarein | AMY2A; MGAM; NR5A2; PTPN9; RBP4 | Rosemary |
| secotanaparholide A | RBP4 | Yarrow |
| shinflavanone | AKR1B1; AMY2A; DPP4; FBP1; GCK; HSD11B1; INSR; | Liquorice |

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| | MGAM; NR5A2; PDK2; PPARA; PPARD; PPARG; PTPN9; PYGL | |
| shinpterocarpin | AKR1B1; AMY2A; HSD11B1; MGAM; NR5A2; PDK2; PTPN9; RBP4; RXRA | Liquorice |
| shogaol | RBP4 | Ginger; rosemary |
| sideritoflavone | RBP4 | Thyme |
| sintenin | NR5A2 | Yarrow |
| smilagenin | AMY2A; DPP4; HSD11B1; NR5A2 | Fenugreek |
| sophoraflavonolside | AMY2A; FBP1; MGAM; NR5A2; PTPN9 | Saffron |
| spathulenol | RBP4 | Allspice; aniseed; basil; black pepper; bay leaves; caraway; cardamom; dill; liquorice; marjoram; oregano; thyme; yarrow |
| stigmasat-3,5-dien-7-one | AMY2A; MGAM; NR5A2 | Thyme |
| stigmast-4-en-3-one | AMY2A; DPP4; MGAM; NR5A2; PPARD | Bay leaves |
| swertiajaponin | FBP1; MGAM | Lemongrass |
| syringin | PPARA | Caraway; fennel |
| syringin-4-O-b-glucoside | PPARA | Fennel |
| syzyginin A | AMY2A; DPP4; MGAM; PDK2 | Clove |

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| syzyginin B | AMY2A; DPP4; FBP1; MGAM; PDK2; PPARA; PTPN9 | Clove |
| tamarixetin-3-O-B-D-glucopyranoside | AMY2A; MGAM; PTPN9 | Clove |
| tashironin | AMY2A; DPP4; NR5A2; PTPN9 | Star anise |
| tashironin A | AMY2A; NR5A2 | Star anise |
| taxifolin | AKR1B1; AMY2A; DPP4; GCK; HSD11B1; MGAM; NR5A2; PDK2; PPARA; PTPN9; PYGL | Oregano; thyme |
| taxifolin-7-O-hexoside (dihydroquercetin-7-glucoside) | FBP1; MGAM; PPARA; PTPN9 | Saffron |
| t-cadinol | RBP4 | Allspice; cinnamon; lemongrass; oregano |
| tectochrysin | MGAM; RBP4 | Rosemary |
| tetradeca-2E,4E,12Z-triene-8,10-diynoic acid isobutylamide | RBP4 | Yarrow |
| tetrahydroxycurcumin | AMY2A; MGAM; PDK2; PPARA; PTPN9 | Turmeric |
| tetrahydroxymethoxychalcone | MGAM; RBP4 | Liquorice |
| thymol | MGAM | Basil; bay leaves; caraway; cardamom; clove; cumin; dill; fennel; lemon balm; liquorice; marjoram; oregano; rosemary; thyme; turmeric; yarrow |
| thymonin | RBP4 | Thyme |
| thymusin | RBP4 | Thyme |
| tigogenin | AMY2A; DPP4; HSD11B1; MGAM; NR5A2 | Fenugreek |

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| torreyol | RBP4 | Allspice; basil; black pepper; lemongrass; thyme; yarrow |
| trachyone | AKR1B1; NR5A2 | Black pepper |
| trans_miyabenol_C | AMY2A; MGAM; PPARA; PTPN9; PYGL | Fennel |
| trans_Muurolol | RBP4 | Allspice; black pepper; cardamom |
| trans_resveratrol_3_O_b_D_glucoopyranoside | AMY2A; MGAM; PPARA; PTPN9 | Fennel |
| trans-a-bergamotene | RBP4 | Basil; black pepper; cumin; dill; ginger; hops; lemongrass; marjoram; nutmeg; oregano; star anise; thyme; turmeric |
| trans-crocetin-(B-D-neopolitanosyl)-(B-D-gentiobiosyl)-ester (trans-5-nG) | AMY2A; FBP1; MGAM | Saffron |
| trans-crocetin-(B-D-neopolitanosyl)-(B-D-glucosyl)-ester (trans-4-nG) | AMY2A | Saffron |
| trans-crocetin-(tri-B-D-glucosyl)-(B-D-gentiobiosyl)-ester (trans-5-tG) | AMY2A; DPP4; FBP1; MGAM; PDK2 | Saffron |
| tribulesterine | AMY2A; RBP4 | Saffron |
| tricholein | AKR1B1; RBP4 | Black pepper |
| trichostachine | MGAM; RBP4 | Black pepper |
| tricin-7-O-D-glucoopyranoside | AMY2A; FBP1; MGAM; PPARA | Fenugreek |
| trigofoenoside A | AMY2A; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Fenugreek |
| trigofoenoside B | AMY2A; FBP1; MGAM; PDK2; PTPN9 | Fenugreek |
| trigofoenoside C | AMY2A; DPP4; FBP1; MGAM | Fenugreek |
| trigofoenoside D | AMY2A; DPP4; FBP1; MGAM; DPK2; PTPN9 | Fenugreek |

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| trigofoenoside F | AMY2A; DPP4; MGAM; NR5A2; PDK2; PTPN9; PYGL | Fenugreek |
| trigofoenoside G | AMY2A; DPP4; NR5A2; PDK2; RBP4 | Fenugreek |
| trigoneoside Xa | AMY2A; DPP4; MGAM; NR5A2; PDK2; PTPN9 | Fenugreek |
| trigoneoside Xb | AMY2A; DPP4; MGAM; NR5A2; PDK2; PTPN9 | Fenugreek |
| trigoneoside XIb | AMY2A; DPP4; MGAM; PTPN9 | Fenugreek |
| trigoneoside XIIa | AMY2A; DPP4; NR5A2 | Fenugreek |
| trigoneoside XIIb | AMY2A; DPP4; NR5A2 | Fenugreek |
| trigoneoside XIIIa | AMY2A; DPP4; MGAM | Fenugreek |
| turmeronol A | RBP4 | Turmeric |
| turmeronol B | RBP4 | Turmeric |
| tyrosine | MGAM | Fenugreek |
| umbelliprenin | AKR1B1; NR5A2; PPARA; RBP4; RXRA | Aniseed; dill |
| uralsaponin C | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| ursolic acid | AMY2A | Basil; lemon balm; rosemary; sage |
| valencene | RBP4 | Basil; bay leaves; hops; lemongrass; sage |
| verimol H | AMY2A | Star anise |
| verimol K | RBP4 | Star anise |
| vetivene | RBP4 | Dill |

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| vicenin 1 | AMY2A; DPP4; FBP1; INSR; MGAM; NR5A2; PYGL | Fenugreek |
| vicenin 2 | DPP4; FBP1; MGAM; NR5A2; PTPN9 | Liquorice; marjoram; sage; thyme; yarrow |
| viridifloral | RBP4 | Allspice; basil; lemongrass; oregano; sage; thyme |
| vitamin B2 | MGAM; RBP4 | Fenugreek; saffron |
| vitamin E | PPARA | Bay leaves; cardamom; ginger; paprika; saffron; thyme |
| vitexin | AMY2A; FBP1; MGAM; NR5A2; PPARA; PTPN9 | Fenugreek; yarrow |
| wogonoside | AMY2A; MGAM; PPARA | Oregano |
| xambioona | AKR1B1; AMY2A; DPP4; FBP1; GCK; HSD11B1; INSR; MGAM; NR5A2; PDK2; PPARA; PPARG; PPARG; PTPN9; PYGL | Liquorice |
| xanthohumol | AKR1B1; AMY2A; MGAM; PPARA; RBP4 | Hops |
| xanthohumol B | MGAM; RXRA | Hops |
| xanthohumol C | AKR1B1; AMY2A; MGAM; NR5A2; PPARA | Hops |
| xanthohumol D | AKR1B1; MGAM; PPARA; PTPN9 | Hops |
| xanthohumol G | MGAM; PTPN9 | Hops |

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| xanthohumol I | AKR1B1; MGAM; NR5A2; PPARA; RXRA | Hops |
| xanthohumol M | MGAM | Hops |
| xanthomicrol | RBP4 | Thyme |
| xanthorrhizol | RBP4 | Turmeric |
| xanthotoxin | RBP4 | Parsley |
| xanthuhumol derivative 7 | MGAM; PPARA; PTPN9 | Hops |
| yamogenin | AMY2A; DPP4; HSD11B1; MGAM; NR5A2 | Fenugreek |
| yuccagenin | AMY2A; DPP4; HSD11B1; NR5A2 | Fenugreek |
| yunganoside A1 | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| yunganoside B1 | AMY2A; DPP4; MGAM; PDK2; PTPN9 | Liquorice |
| yunganoside J1 | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9 | Liquorice |
| yunganoside K2 | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Liquorice |
| yunganoside L1 | AMY2A; DPP4; FBP1; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| yunganoside L2 | AMY2A; DPP4; FBP1; MGAM; NR5A2; PDK2; PTPN9; PYGL | Liquorice |

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| yunnaneic acid F | AMY2A; HSD11B1; MGAM; NR5A2; PPARA; PTPN9; PYGL | Lemon balm |
| yunnanglysaponin B | AMY2A; DPP4; FBP1; INSR; MGAM; PDK2; PTPN9; PYGL | Liquorice |
| zaluzanin D | NR5A2 | Bay leaves |
| zingiberene | RBP4 | Aniseed; caraway; ginger; lemongrass; turmeric |
| zizybeoside I | MGAM; PTPN9 | Fennel |