TABLE S3 Geographical and physico-chemical data from isolation sites of *Thermus* strains devoid of rubisco

Strain	Isolated from	Rubisco large and small subunit present?	Carbonic anhydrase or Ferripyochelin binding protein[a] present?	Carboxysome proteins (carbon dioxide concentrating mechanism protein)	Temperature (°C) and pH of isolation point	Prevalent geochemical trait of hot spring / thermal area	References
T. thermophilus HB8	Hot spring (Pool B) at Mine, Shizuoka Prefecture, Japan	No	No	No	T = 80 pH = 6.3	Very low concentrations of salts and sulfur. Considered as fresh water	(16)
T. thermophilus JL-18	Sandy's Spring West (SSW-18b), Great Boiling Springs geothermal field, Nevada, USA	No	No	No	T = 86.6 pH = 7.21	Na^+ = 61.89 mg/L K^+ = 2.69 mg/L Ca^{2+} = 1.95 mg/L Cl^- = 56.60 mg/L SO_4^{2-} = 3.72 mg/L CO_3^{2-} = 0.84 mg/L	(17) (18)
T. scotoductus SA-01	Water sample taken 3.2 km below the surface, Western Deep Levels Ltd. No.1, Carletonville, South Africa	No	No	No	T = 60 pH = 8.9	Primarily Na-Cl type water. Na^+ = 204.3 mg/L Ca^{2+} = 47.4 mg/L K^+ = 2.0 mg/L Cl^- = 433.6 mg/L SO_4^{2-} = 10.4 mg/L CO_3^{2-} = 1.5 mg/L	(19) (20)
T. aquaticus Y51MC23	Bath hot spring, Lower Geyser Basin,Yellowstone National Park, USA	No	No	No	T = 88 pH = 8.9	Dominant dissolved minerals: Cl^- = 297 mg/L SiO_2 = 244.8 mg/L	Personal communication: Dr. David Mead (Lucigen)