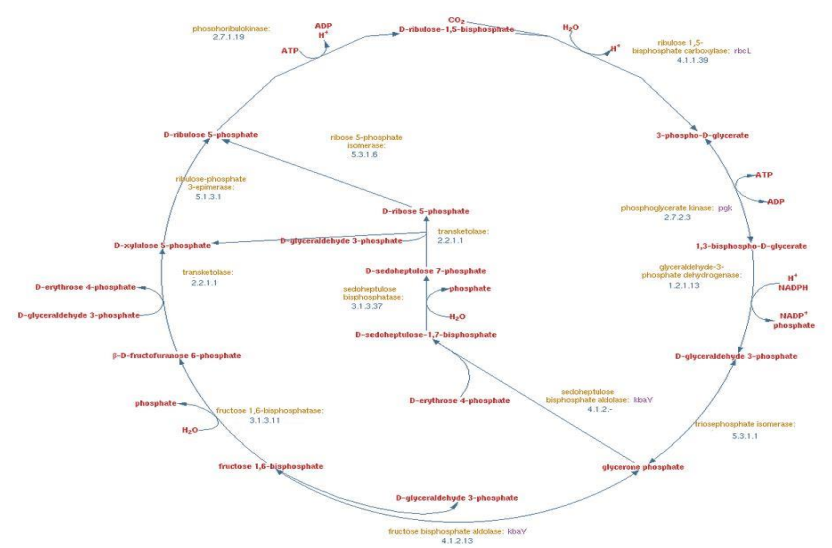


Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. sp. NMX2 A.1		EC 4.1.1.39 ribulose 1,5-bisphosphate carboxylase small subunit: TNMX_12240 ribulose 1,5-bisphosphate carboxylase: rbcL phosphoglycerate kinase: pgk EC 1.2.1.13 None EC 5.3.1.1 triosephosphate isomerase: TNMX_06865 EC 4.1.2.- None EC 3.1.3.37 fructose 1,6-bisphosphatase: TNMX_12295 EC 2.2.1.1 transketolase: TNMX_12295 EC 5.3.1.6 ribose 5-phosphate isomerase: TNMX_05945 EC 4.1.2.13 fructose 1,6-bisphosphate aldolase: TNMX_12220 fructose 1,6-bisphosphate aldolase: TNMX_12285 EC 3.1.3.11 fructose 1,6-bisphosphatase: TNMX_041285 fructose 1,6-bisphosphatase: glpX fructose 1,6-bisphosphatase: glpX EC 2.2.1.1 transketolase: TNMX_12295 EC 5.1.3.1 ribulose-phosphate 3-epimerase: GTNMX_12230 ribulose-phosphate 3-epimerase: TNMX_12225 EC 2.7.1.19 None

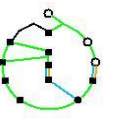
Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. igniterrae ATCC 700962		EC 4.1.1.39 ribulose bisphosphate carboxylase small chain: B128_RS0108640 ribulose bisphosphate carboxylase: rbcL EC 2.7.2.3 phosphoglycerate kinase: pgk EC 1.2.1.13 glyceraldehyde-3-phosphate dehydrogenase: B128_RS0102675 EC 5.3.1.1 triosephosphate isomerase: B128_RS0102665 EC 4.1.2.- fructose-bisphosphate aldolase: kbaY EC 3.1.3.37 fructose 1,6-bisphosphatase: B128_RS0106090 EC 2.2.1.1 transketolase: B128_RS0107750 EC 5.3.1.6 ribose 5-phosphate isomerase: B128_RS0104955 EC 4.1.2.13 fructose-bisphosphate aldolase: kbaY fructose-bisphosphate aldolase: kbaY EC 3.1.3.11 fructose 1,6-bisphosphatase: B128_RS0108650 fructose 1,6-bisphosphatase: B128_RS0106090 EC 2.2.1.1 transketolase: B128_RS0107750 EC 5.1.3.1 ribulose-phosphate 3-epimerase: B128_RS0108630 ribulose-phosphate 3-epimerase: B128_RS0108625 EC 2.7.1.19 ribulose-phosphate 3-epimerase: B128_RS0108630

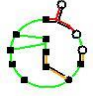
Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. islandicus DSM 21543		EC 4.1.1.39 ribulose bisphosphate carboxylase small chain: H531_RS0106280 ribulose bisphosphate carboxylase: rbcL EC 2.7.2.3 phosphoglycerate kinase: pgk EC 1.2.1.13 glyceraldehyde-3-phosphate dehydrogenase: H531_RS0104990 EC 5.3.1.1 triosephosphate isomerase: H531_RS0105000 EC 4.1.2.- fructose-bisphosphate aldolase: kbaY EC 3.1.3.37 fructose 1,6-bisphosphatase: H531_RS0111350 EC 2.2.1.1 transketolase: H531_RS0106335 EC 5.3.1.6 ribose 5-phosphate isomerase: H531_RS0105725 EC 4.1.2.13 fructose-bisphosphate aldolase: kbaY fructose-bisphosphate aldolase: kbaY EC 3.1.3.11 fructose 1,6-bisphosphatase: H531_RS0106290 fructose 1,6-bisphosphatase: H531_RS0103400 fructose 1,6-bisphosphatase: H531_RS0111350 EC 2.2.1.1 transketolase: H531_RS0106335 EC 5.1.3.1 ribulose-phosphate 3-epimerase: H531_RS0106270 ribulose-phosphate 3-epimerase: H531_RS0106265 EC 2.7.1.19 ribulose-phosphate 3-epimerase: H531_RS0106270




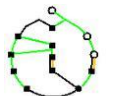
**Key to Pathway Evidence Glyph Edge Colors**

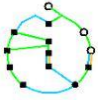


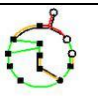
- Green** Enzyme present. An enzyme for this reaction has been identified in this organism.
- Blue** Enzyme present by hole filler. An enzyme for this reaction has been identified in this organism by the Pathway Hole Filler.
- Black** Enzyme absent. An enzyme for this reaction has not been identified in this organism.
- Red** Key reaction. The reaction has been designated a key reaction of this pathway
- Orange** Unique reaction. This reaction has not been designated a key reaction, but is not present in any other pathway in this PGDB (but spontaneous/other. Used for spontaneous reactions, or used for lines that do not denote reactions (e.g., denoting repetition in
- Gray**



Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. oshimai JL-2		EC 4.1.1.39 ribulose biphosphate carboxylase small subunit: Theos_1734 ribulose 1,5-biphosphate carboxylase, large subunit: Theos_1735 EC 2.7.2.3 3-phosphoglycerate kinase: Theos_0920 EC 1.2.1.13 glyceraldehyde-3-phosphate dehydrogenase, type I: Theos_0919 EC 5.3.1.1 triosephosphate isomerase: Theos_0953 EC 4.1.2.- fructose-1,6-biphosphate aldolase, class II: Theos_1730 EC 3.1.3.37 fructose-1,6-biphosphatase, class II: Theos_1644 EC 2.2.1.1 transketolase: Theos_1745 EC 5.3.1.6 ribose 5-phosphate isomerase: Theos_0857 EC 4.1.2.13 fructose-1,6-biphosphate aldolase, class II: Theos_0264 fructose-1,6-biphosphate aldolase, class II: Theos_1730 EC 3.1.3.11 fructose-1,6-biphosphatase family protein: Theos_0367 archaeal fructose 1,6-biphosphatase: Theos_1016 fructose-1,6-biphosphatase, class II: Theos_1644 fructose-1,6-biphosphatase, class II: Theos_1736 EC 2.2.1.1 transketolase: Theos_1745 EC 5.1.3.1 ribulose-phosphate 3-epimerase: Theos_1731 EC 2.7.1.19 None

Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. scotoductus SA-01		<b>This pathway is not marked as present in this organism.</b> EC 4.1.1.39 None EC 2.7.2.3 phosphoglycerate kinase: pgk EC 1.2.1.13 None EC 5.3.1.1 triose-phosphate isomerase: tpiA EC 4.1.2.- None EC 3.1.3.37 None EC 2.2.1.1 transketolase: tkt EC 5.3.1.6 ribose 5-phosphate isomerase A: rpiA EC 4.1.2.13 fructose-1,6-biphosphate aldolase: fba EC 3.1.3.11 fructose-1,6-biphosphatase: glpX EC 2.2.1.1 transketolase: tkt EC 5.1.3.1 ribulose-phosphate 3-epimerase: rpe EC 2.7.1.19 phosphoribulokinase/uridine kinase: TSC_c19980

Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. aquaticus Y51MC23		<b>This pathway is not marked as present in this organism.</b> EC 4.1.1.39 None EC 2.7.2.3 phosphoglycerate kinase: pgk EC 1.2.1.13 None EC 5.3.1.1 triosephosphate isomerase: TAQDRAFT_RS04300 EC 4.1.2.- None EC 3.1.3.37 None EC 2.2.1.1 transketolase: TAQDRAFT_RS03285 EC 5.3.1.6 ribose 5-phosphate isomerase A: TAQDRAFT_RS02530 EC 4.1.2.13 fructose-bisphosphate aldolase: kbaY EC 3.1.3.11 fructose 1,6-bisphosphatase: TAQDRAFT_RS05270 fructose 1,6-bisphosphatase: TAQDRAFT_RS10510 EC 2.2.1.1 transketolase: TAQDRAFT_RS03285 EC 5.1.3.1 ribulose-phosphate 3-epimerase: TAQDRAFT_RS03275 EC 2.7.1.19 None

Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. caliditerrae		EC 4.1.1.39 ribulose 1,5-biphosphate carboxylase small subunit: E172_RS01305 ribulose 1,5-biphosphate carboxylase: rbcL EC 2.7.2.3 phosphoglycerate kinase: pgk EC 1.2.1.13 None EC 5.3.1.1 triosephosphate isomerase: E172_RS04495 EC 4.1.2.- None EC 3.1.3.37 None EC 2.2.1.1 transketolase: E172_RS01250 EC 5.3.1.6 ribose 5-phosphate isomerase: E172_RS02360 EC 4.1.2.13 None EC 3.1.3.11 fructose 1,6-bisphosphatase: E172_RS01295 fructose 1,6-bisphosphatase: E172_RS01970 EC 2.2.1.1 transketolase: E172_RS01250 EC 5.1.3.1 ribulose-phosphate 3-epimerase: E172_RS01315 ribulose-phosphate 3-epimerase: E172_RS01320 EC 2.7.1.19 None

Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. filiformis		<p>EC 4.1.1.39 ribulose 1,5-bisphosphate carboxylase small subunit: THFILI_RS03165            ribulose 1,5-bisphosphate carboxylase: rbcL</p> <p>EC 2.7.2.3 phosphoglycerate kinase: pgk</p> <p>EC 1.2.1.13 glyceraldehyde-3-phosphate dehydrogenase: THFILI_RS07430</p> <p>EC 5.3.1.1 triosephosphate isomerase: THFILI_RS07420</p> <p>EC 4.1.2.- tagatose-bisphosphate aldolase: kbaY</p> <p>EC 3.1.3.37 fructose 1,6-bisphosphatase: THFILI_RS10045</p> <p>EC 2.2.1.1 transketolase: THFILI_RS06125</p> <p>EC 5.3.1.6 ribose 5-phosphate isomerase: THFILI_RS04005</p> <p>EC 4.1.2.13 tagatose-bisphosphate aldolase: kbaY</p> <p>EC 3.1.3.11 fructose 1,6-bisphosphatase: THFILI_RS10045            fructose 1,6-bisphosphatase: THFILI_RS08190            fructose 1,6-bisphosphatase: THFILI_RS03155</p> <p>EC 2.2.1.1 transketolase: THFILI_RS06125</p> <p>EC 5.1.3.1 ribulose-phosphate 3-epimerase: THFILI_RS03175            ribulose-phosphate 3-epimerase: THFILI_RS03180</p> <p>EC 2.7.1.19 ribulose-phosphate 3-epimerase: THFILI_RS03175</p>
T. sp. CCB_US3_UF1		<p><b>This pathway is not marked as present in this organism.</b></p> <p>None</p> <p>EC 4.1.1.39 None</p> <p>EC 2.7.2.3 phosphoglycerate kinase: TCCBUS3UF1_11130</p> <p>EC 1.2.1.13 glyceraldehyde-3-phosphate dehydrogenase: TCCBUS3UF1_11120</p> <p>EC 5.3.1.1 triosephosphate isomerase: TCCBUS3UF1_11140</p> <p>EC 4.1.2.- None</p> <p>EC 3.1.3.37 None</p> <p>EC 2.2.1.1 transketolase: TCCBUS3UF1_17960</p> <p>EC 5.3.1.6 Ribose 5-phosphate isomerase: TCCBUS3UF1_15860</p> <p>EC 4.1.2.13 Fructose-bisphosphate aldolase: TCCBUS3UF1_3550            Fructose-bisphosphate aldolase: TCCBUS3UF1_20000</p> <p>EC 3.1.3.11 Fructose-1,6-bisphosphatase, class II: TCCBUS3UF1_16590</p> <p>EC 2.2.1.1 transketolase: TCCBUS3UF1_17960</p> <p>EC 5.1.3.1 Ribulose-5-phosphate 3-epimerase: TCCBUS3UF1_17940</p> <p>EC 2.7.1.19 None</p>
T. thermophilus HB27		<p><b>This pathway is not marked as present in this organism.</b></p> <p>None</p> <p>EC 4.1.1.39 None</p> <p>EC 2.7.2.3 2-phosphoglycerate kinase: TTC0121            phosphoglycerate kinase: pgk</p> <p>EC 1.2.1.13 None</p> <p>EC 5.3.1.1 triosephosphate isomerase: tpiA</p> <p>EC 4.1.2.- None</p> <p>EC 3.1.3.37 None</p> <p>EC 2.2.1.1 transketolase: TTC1896</p> <p>EC 5.3.1.6 ribose-5-phosphate isomerase A: TTC0932</p> <p>EC 4.1.2.13 fructose-bisphosphate aldolase: TTC1414</p> <p>EC 3.1.3.11 fructose 1,6-bisphosphatase II: glpX</p> <p>EC 2.2.1.1 transketolase: TTC1896</p> <p>EC 5.1.3.1 ribulose-phosphate 3-epimerase: TTC1898</p> <p>EC 2.7.1.19 None</p>
T. thermophilus HB8		<p><b>This pathway is not marked as present in this organism.</b></p> <p>None</p> <p>EC 4.1.1.39 None</p> <p>EC 2.7.2.3 phosphoglycerate kinase: pgk</p> <p>EC 1.2.1.13 glyceraldehyde 3-phosphate dehydrogenase: TTHA0905</p> <p>EC 5.3.1.1 triosephosphate isomerase: tpiA</p> <p>EC 4.1.2.- None</p> <p>EC 3.1.3.37 None</p> <p>EC 2.2.1.1 transketolase: TTHA0108</p> <p>EC 5.3.1.6 ribose-5-phosphate isomerase A: TTHA1299</p> <p>EC 4.1.2.13 fructose-1,6-bisphosphate aldolase: TTHA1773</p> <p>EC 3.1.3.11 fructose 1,6-bisphosphatase II: glpX</p> <p>EC 2.2.1.1 transketolase: TTHA0108</p> <p>EC 5.1.3.1 ribulose-phosphate 3-epimerase: TTHA0106</p> <p>EC 2.7.1.19 None</p>

Organism	Evidence Glyph	Enzymes and Genes for Calvin-Benson-Bassham cycle
T. thermophilus JL-18		<p><b>This pathway is not marked as present in this organism.</b></p> <p>EC 4.1.1.39 None            EC 2.7.2.3 3-phosphoglycerate kinase: TUL18_1141            EC 1.2.1.13 None            EC 5.3.1.1 triosephosphate isomerase: TUL18_1110            EC 4.1.2.- None            EC 3.1.3.37 None            EC 2.2.1.1 transketolase: TUL18_1811            EC 5.3.1.6 ribose 5-phosphate isomerase: TUL18_0751            EC 4.1.2.13 fructose-1,6-bisphosphate aldolase: TUL18_0271            EC 3.1.3.11 fructose-1,6-bisphosphatase: TUL18_0601            fructose 1,6-bisphosphatase: TUL18_1069            inositol monophosphate/fructose-1,6-bisphosphatase family protein: TUL18_1777            EC 2.2.1.1 transketolase: TUL18_1811            EC 5.1.3.1 ribulose-phosphate 3-epimerase: TUL18_1809            EC 2.7.1.19 None</p>
T. thermophilus SGO.5IP17-16		<p><b>This pathway is not marked as present in this organism.</b></p> <p>EC 4.1.1.39 None            EC 2.7.2.3 phosphoglycerate kinase: Ththe16_0909            EC 1.2.1.13 None            EC 5.3.1.1 triosephosphate isomerase: Ththe16_0938            EC 4.1.2.- None            EC 3.1.3.37 None            EC 2.2.1.1 transketolase: Ththe16_0277            EC 5.3.1.6 ribose 5-phosphate isomerase: Ththe16_1310            EC 4.1.2.13 fructose-1,6-bisphosphate aldolase: Ththe16_1790            EC 3.1.3.11 fructose-1,6-bisphosphatase: Ththe16_1457            EC 2.2.1.1 transketolase: Ththe16_0277            EC 5.1.3.1 ribulose-phosphate 3-epimerase: Ththe16_0279            EC 2.7.1.19 None</p>

**Fig. S1** Comparison of the putative Calvin-Benson-Bassham cycles of *Thermus* sp. NMX2.A1 with *Thermus* spp. available in the BioCyc PGDB database using Species Compare in Pathway Tools.