

## Product datasheet for TP727425

### Escherichia coli Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant E. coli Tryptophan Synthase $\beta$ Chain/Trp B
Species:	Escherichia coli
Expression cDNA Clone or AA Sequence:	Thr2-Ile397
Tag:	N-His
Buffer:	Supplied as a 0.2 um filtered solution of PBS, pH 7.4.
Note:	Recombinant E.coli Tryptophan synthase beta chain is produced by our E.coli expression system and the target gene encoding Thr2-Ile397 is expressed with a 6His tag at the N-terminus.
Stability:	12 months from date of despatch
Summary:	Tryptophan synthase is an enzyme that catalyzes the final two steps in the biosynthesis of tryptophan. It is commonly found in Eubacteria, Archaeobacteria, Protista, Fungi, and Plantae, but is absent from animals such as humans. Tryptophan synthase typically exists as an $\alpha_2\beta_2$ complex. The alpha subunit is responsible for the aldol cleavage of indoleglycerol phosphate to indole and glyceraldehyde 3-phosphate: L-serine + 1-C-(indol-3-yl)glycerol 3-phosphate = L-tryptophan + D-glyceraldehyde 3-phosphate + H <sub>2</sub> O. The beta subunits catalyze the irreversible condensation of indole and serine to form tryptophan in a pyridoxal phosphate (PLP) dependent reaction. Their assembly into a complex leads to structural changes in both subunits resulting in reciprocal activation.



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