# Recombinant E.coli Tryptophan Synthase β Chain/Trp B Protein (His Tag)

**Catalog No.** PKSQ050055

***Note:*** Centrifuge before opening to ensure complete recovery of vial contents.

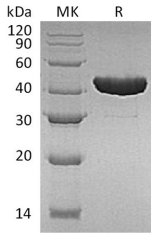
## Description

| | |
|---|---|
| **Synonyms** | Tryptophan synthase beta chain;trpB |
| **Species** | E.coli |
| **Expression Host** | E.coli |
| **Sequence** | Thr2-Ile397 |
| **Accession** | P0A879 |
| **Calculated Molecular Weight** | 43.8 kDa |
| **Observed molecular weight** | 38-48 kDa |
| **Tag** | N-His |

## Properties

| | |
|---|---|
| **Purity** | > 95 % as determined by reducing SDS-PAGE. |
| **Endotoxin** | < 1.0 EU per μg of the protein as determined by the LAL method. |
| **Storage** | Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles. |
| **Shipping** | This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < - 20°C. |
| **Formulation** | Supplied as a 0.2 μm filtered solution of 20mM Tris-HCl, 8% Sucrose, 0.05% Tween 80, pH 8.5. |
| **Reconstitution** | Not Applicable |

## Data




> 95 % as determined by reducing SDS-PAGE.

## Background

Tryptophan synthase is an enzyme that catalyzes the final two steps in the biosynthesis of tryptophan. It is commonly found in Eubacteria, Archaebacteria, Protista, Fungi, and Plantae, but is absent from animals such as humans. Tryptophan synthase typically exists as an α-ββ-α 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 + H2O.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



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in both subunits resulting in reciprocal activation.



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