Recombinant TPH2 protein (His tag)

Catalog Number	540689
Synonyms	Neuronal tryptophan hydroxylase; Tryptophan 5-monooxygenase 2
Species	Human
Expression System	E. coli
Accession	Q8IWU9
Molecular Weight	Predictes a molecular mass of 50.98 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band.

Product Information

Sequence Region	63-490
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 63-490 aa (Q8IWU9) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Tryptophan 5-hydroxylase 2 (TPH2) Fragment (aa 63-490) is a high-purity protein designed for neuroscience and enzymatic research. This 428-amino acid fragment fully encompasses the ACT functional domain (aa 65-140), making it an ideal tool for studying domain-specific mechanisms in serotonin biosynthesis. Tryptophan 5-hydroxylase 2 (TPH2) is the neuronal isoform of tryptophan hydroxylase, encoded by the TPH2 gene in humans. As the rate-limiting enzyme in serotonin synthesis within the brain, TPH2 catalyzes the conversion of tryptophan to 5-hydroxytryptophan. This enzyme plays a critical role in regulating serotonin levels, which are essential for numerous neurological functions including mood regulation, sleep-wake cycles, and cognitive processes. The specific subcellular localization of TPH2, while not detailed here, is fundamental to understanding its neuronal-specific functions in serotonin production pathways.