TPH2 Protein, Human (His)

Cat. No.:	HY-P71375
Synonyms:	Tryptophan 5-Hydroxylase 2; Neuronal Tryptophan Hydroxylase; Tryptophan 5-Monooxygenase 2; TPH2; NTPH
Species:	Human
Source:	E. coli
Accession:	Q8IWU9 (M1-I490)
Gene ID:	121278
Molecular Weight:	Approximately 60.0 kDa

PROPERTIES

AA Sequence	MQPAMMMFSS KYWARRGFSL DSAVPEEHQL LGSSTLNKPN SGKNDDKGNK GSSKREAATE SGKTAVVFSL KNEVGGLVKA LRLFQEKRVN MVHIESRKSR RRSSEVEIFV DCECGKTEFN ELIQLLKFQT TIVTLNPPEN IWTEEEELED VPWFPRKISE LDKCSHRVLM YGSELDADHP GFKDNVYRQR RKYFVDVAMG YKYGQPIPRV EYTEEETKTW GVVFRELSKL YPTHACREYL KNFPLLTKYC GYREDNVPQL EDVSMFLKER SGFTVRPVAG YLSPRDFLAG LAYRVFHCTQ YIRHGSDPLY TPEPDTCHEL LGHVPLLADP KFAQFSQEIG LASLGASDED VQKLATCYFF TIEFGLCKQE GQLRAYGAGL LSSIGELKHA LSDKACVKAF DPKTTCLQEC LITTFQEAYF VSESFEEAKE KMRDFAKSIT RPFSVYFNPY TQSIEILKDT RSIENVVQDL RSDLNTVCDA LNKMNQYLGI
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of Tris-based buffer，50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Tryptophan 5-hydroxylase 2 (TPH2), an isozyme of tryptophan hydroxylase, is a member of the pterin-dependent aromatic acid hydroxylase family. TPH2 is selectively expressed only in the serotonergic neurons of the raphe nuclei and is a rate-limiting enzyme in the brain serotonin synthesis pathway. TPH2 plays a more prominent role in the 5-HT synthesis in the brain. 5HT is causally involved in numerous central nervous activities, and it has several functions in peripheral tissues, including the maintenance of vascular tone and gut motility. TPH2 plays a role in anxiety-, aggression- and depression-related personality traits and in the pathogenesis of disorders featuring deficits in cognitive control and emotion regulation. Moreover, it is a key factor in maintaining normal serotonin transfer in the central nervous system. TPH2 isoform is specifically expressed in the brain[1][2].

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