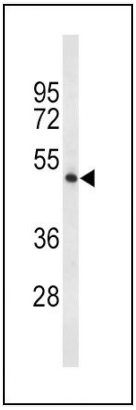
TPH2 Antibody – Rabbit Polyclonal

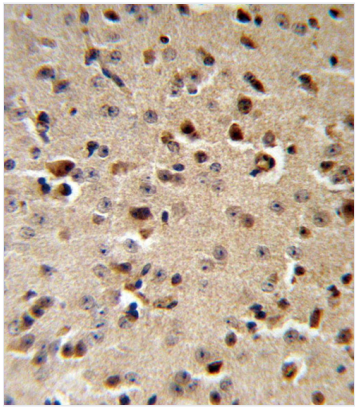
PRODUCT OVERVIEW

Product Name	TPH2, Polyclonal Antibody
Full Product Name	TPH2, ID (TPH2, NTPH, Tryptophan 5-hydroxylase 2, Neuronal tryptophan hydroxylase, Tryptophan 5-monooxygenase 2) (Biotin)
Product Gene Name	anti-TPH2 antibody
Product Synonym Names	TPH2; NTPH; Tryptophan 5-hydroxylase 2; Neuronal tryptophan hydroxylase; Tryptophan 5-monooxygenase 2
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Biotin.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
Molecular Weight	56,057 Da
Chromosome Location	Chromosome: 12; NC_000012.11 (72332626..72426221). Location: 12q21.1
OMIM	607478
3D Structure	ModBase 3D Structure for Q8IWU9
Immunogen	TPH2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 173~203 amino acids from the Center region of human TPH2.
Conjugate	Biotin
Note	Preservative Free
Product Categories/Family for anti-TPH2 antibody	Antibodies; Enzymes
Applications Tested/Suitable for anti-TPH2 antibody	Flow Cytometry (FC/FACS), ELISA (EIA), Immunohistochemistry (IHC), Western Blot (WB)
Application Notes for anti-TPH2 antibody	FC/FACS: 1:10-50 ELISA: 1:1,000 IHC: 1:50-100 WB: 1:100-500 Applications are based on unconjugated antibody.
Related Product Information for anti-TPH2 antibody	This protein is a member of the cytidine deaminase gene family. It is one of seven related genes or pseudogenes found in a cluster, thought to result from gene duplication, on chromosome 22. Members of the cluster encode proteins that are structurally and functionally related to the C to U RNA-editing cytidine deaminase APOBEC1. It is thought that the proteins may be RNA editing enzymes and have roles in growth or cell cycle control.
Product References and Citations for anti-TPH2 antibody	Khatua, A.K., et.al., Virology 400 (1), 68-75 (2010). Koning, F.A., et.al., J. Virol. 83 (18), 9474-9485 (2009).

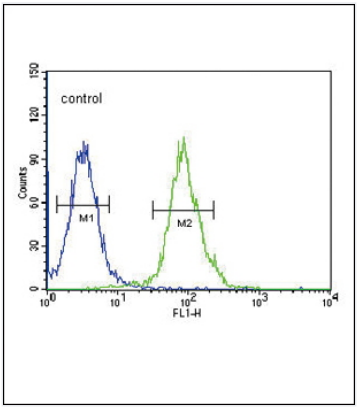
Other Notes	Small volumes of anti-TPH2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for TPH2 purchase	MBS6357628 is an antibody targeting TPH2. Also known as TPH2, ID (TPH2, NTPH, Tryptophan 5-hydroxylase 2, Neuronal tryptophan hydroxylase, Tryptophan 5-monooxygenase 2) (Biotin). Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-TPH2 antibody
Western blot analysis of TPH2 Antibody (Center) in 293 cell line lysates (35ug/lane). TPH2 (arrow) was detected using the purified Pab.



Immunohistochemistry (IHC) of anti-TPH2 antibody
TPH2 Antibody (Center) IHC analysis in formalin fixed and paraffin embedded mouse brain followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the TPH2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



Flow Cytometry (FC/FACS) of anti-TPH2 antibody
TPH2 Antibody (Center) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TPH2. It may not necessarily be applicable to this product.

NCBI GI #	31795563
NCBI GeneID	121278
NCBI Accession #	NP_775489.2
UniProt Primary Accession #	Q8IWU9
UniProt Secondary Accession #	Q14CB0; A6NGA4
UniProt Related Accession #	Q8IWU9
GenBank Nucleotide #	NM_173353.3
NCBI Official Full Name	tryptophan 5-hydroxylase 2

NCBI Official Synonym Full Names	tryptophan hydroxylase 2
NCBI Official Symbol	TPH2
NCBI Official Synonym Symbols	NTPH; ADHD7
UniProt Protein Name	Tryptophan 5-hydroxylase 2
UniProt Synonym Protein Names	Neuronal tryptophan hydroxylase; Tryptophan 5-monooxygenase 2
Protein Family	Tryptophan 5-hydroxylase
UniProt Gene Name	TPH2
UniProt Synonym Gene Names	NTPH
UniProt Entry Name	TPH2_HUMAN
NCBI Protein Information	tryptophan 5-hydroxylase 2; tryptophan 5-monooxygenase 2; neuronal tryptophan hydroxylase
NCBI Summary for TPH2	This gene encodes a member of the pterin-dependent aromatic acid hydroxylase family. The encoded protein catalyzes the first and rate limiting step in the biosynthesis of serotonin, an important hormone and neurotransmitter. The human genome contains two related tryptophan hydroxylases, one on chromosome 11p15-p14 and one on chromosome 12q21. This gene is expressed predominantly in the brain stem. Mutations in this gene may be associated with psychiatric diseases such as bipolar affective disorder and major depression. [provided by RefSeq, Jul 2008]
UniProt Comments for TPH2	TPH2: an enzyme that is rate-limiting in the biosynthesis of serotonin. It catalyzes the biopterin dependent monooxygenation of tryptophan to 5-hydroxytryptophan (5HT), which is subsequently decarboxylated to form the neurotransmitter serotonin. Its expression is limited to a few specialized tissues: raphe neurons, pinealocytes, mast cells, mononuclear leukocytes, beta-cells of the islets of Langerhans, and intestinal and pancreatic enterochromaffin cells. Two alternatively spliced isoforms have been described. Isoform 2 appears to be expressed exclusively in the brain, and is expressed at significantly higher levels in the raphe nuclei than isoform 1. Protein type: Amino Acid Metabolism - tryptophan; Oxidoreductase; EC 1.14.16.4 Chromosomal Location of Human Ortholog: 12q21.1 Cellular Component: neuron projection; cytosol Molecular Function: amino acid binding; tryptophan 5-monooxygenase activity; iron ion binding Biological Process: response to nutrient levels; circadian rhythm; indolalkylamine biosynthetic process; aromatic amino acid family metabolic process; response to estrogen stimulus; response to glucocorticoid stimulus; response to activity; response to calcium ion; serotonin biosynthetic process Disease: Major Depressive Disorder; Attention Deficit-hyperactivity Disorder, Susceptibility To, 7
Research Articles on TPH2	**1.** This studty the Tph2KI mice carrying the Tph2(R439H) allele exhibit an increase in AMY-mPFC delta synchrony.
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