

#51124 Store at -20C

TPH2 (D3E5I) XP® Rabbit mAb

Cell Signaling
TECHNOLOGY®Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IF-F	H M R	Endogenous	52	Rabbit IgG	#Q8IWU9	121278

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Immunofluorescence (Frozen)

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

TPH2 (D3E5I) Rabbit mAb recognizes endogenous levels of total TPH2 protein. Species cross-reactivity for Western blot is human and rat only. Mouse cross-reactivity is determined by immunofluorescence.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu30 of human TPH2 protein.

Background

Tryptophan hydroxylase (TPH) is the rate-limiting enzyme in the biosynthesis of serotonin (1) by converting tryptophan to 5-hydroxy-L-tryptophan (2). Two isoforms of TPH exist: TPH-1 is mainly expressed in the periphery, whereas the expression of TPH-2 is restricted to neuronal cells and the central nervous system (3). Most of the serotonin found throughout the body is synthesized by TPH-1 in enterochromaffin cells of the gastrointestinal tract. Targeted disruption of the *tph1* gene results in low levels of circulating and tissue serotonin (4).

Polymorphisms and regulation of the *tph2* gene are involved in cognitive, emotional, and psychiatric disorders (5-7)

Background References

1. Hale, M.W. et al. (2011) *J Chem Neuroanat* 41, 219-26.
2. Silva, S.R. et al. (2011) *Anticancer Res* 31, 1153-60.
3. Walther, D.J. et al. (2003) *Science* 299, 76.
4. Amireault, P. et al. (2011) *Proc Natl Acad Sci U S A* 108, 13141-6.
5. Waider, J. et al. (2011) *Psychoneuroendocrinology* 36, 393-405.
6. Choong, M.Y. et al. (2014) *Psychiatry Res* 220, 1163-6.
7. Zhang, Y. et al. (2015) *Mol Med Rep* 12, 3184-90.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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