

TPH2 (D3E5I) XP[®] Rabbit mAb

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

Application

Western Blotting
Immunofluorescence (Frozen)

Dilution

1:1000
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

- Hale, M.W. et al. (2011) *J Chem Neuroanat* 41, 219-26.
- Silva, S.R. et al. (2011) *Anticancer Res* 31, 1153-60.
- Walther, D.J. et al. (2003) *Science* 299, 76.
- Amireault, P. et al. (2011) *Proc Natl Acad Sci U S A* 108, 13141-6.
- Waider, J. et al. (2011) *Psychoneuroendocrinology* 36, 393-405.
- Choong, M.Y. et al. (2014) *Psychiatry Res* 220, 1163-6.
- 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

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

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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