

#14032 Store at -20°C

GPR50 (D1D6I) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H	Endogenous	70-75	Rabbit IgG	#Q13585	9248

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)

Dilution

1:1000
1:50
1:400

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

GPR50 (D1D6I) Rabbit mAb recognizes endogenous levels of total GPR50 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro420 of human GPR50 protein.

Background

G protein-coupled receptor 50 (GPR50) is an orphan G protein coupled receptor with high sequence homology to the melatonin receptors MT1 and MT2. While classified as a member of the melatonin receptor family and also known as melatonin-related receptor, GPR50 does not bind melatonin (1). GPR50 forms heterodimers with MT1 and MT2 and acts as a negative regulator of MT1 agonist binding and G protein coupling; inhibition of melatonin receptor activity is dependent on the long, proline-rich carboxy terminal tail of GPR50 (2). On a physiological level, GPR50 is involved in the regulation of adaptive thermoregulation in mammals and deletion of *GPR50* in mice produces a profound effect on the response to fasting and facilitates entry into torpor (3). Polymorphisms in the corresponding *GPR50* gene are associated with bipolar affective disorder and major depressive disorder in women, indicating that variation in *GPR50* may be an important gender-specific risk factor for certain mental disorders (4,5).

Background References

1. Reppert, S.M. et al. (1996) *FEBS Lett* 386, 219-24.
2. Levoe, A. et al. (2006) *EMBO J* 25, 3012-23.
3. Bechtold, D.A. et al. (2012) *Curr Biol* 22, 70-7.
4. Macintyre, D.J. et al. (2010) *Neurosci Lett* 475, 169-73.
5. Thomson, P.A. et al. (2005) *Mol Psychiatry* 10, 470-8.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

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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