

GPR50 Antibody

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

Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

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

Specificity/Sensitivity

GPR50 Antibody recognizes endogenous levels of total GPR50 protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly377 of human GPR50 protein. Antibodies are purified by protein A and peptide affinity chromatography.

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

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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