

Oligophrenin-1 Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	92	Rabbit	#O60890	4983

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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

Oligophrenin-1 Antibody recognizes endogenous levels of total Oligophrenin-1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp647 of human Oligophrenin-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Oligophrenin-1 is a RhoGTPase-activating protein encoded by the gene OPHN1 (1). Oligophrenin-1 is composed of an N-terminal BAR domain, a pleckstrin homology domain, a central RhoGAP domain, and three putative C-terminal SH3-binding sites. Oligophrenin-1 plays a role in membrane signaling through interaction of its BAR domain with curved membranes, binding of its pleckstrin homology domain with membrane phosphoinositides, and interaction of the SH3-binding sites with adaptor proteins (1-3). Oligophrenin-1 regulates synaptic vesicle endocytosis (3) and plays an important role in dendritic spine morphogenesis (4). Furthermore, by interacting with the transcription factor Rev-erba and protecting it from degradation, Oligophrenin-1 participates in the regulation of the circadian rhythm in the hippocampus (5). Research studies have demonstrated an involvement of Oligophrenin-1 in X-linked mental retardation (1).

Background References

1. Billuart, P. et al. (1998) *Nature* 392, 923-6.
2. Khelifaoui, M. et al. (2007) *J Neurosci* 27, 9439-50.
3. Nakano-Kobayashi, A. et al. (2009) *Curr Biol* 19, 1133-9.
4. Govek, E.E. et al. (2004) *Nat Neurosci* 7, 364-72.
5. Valnegri, P. et al. (2011) *Nat Neurosci* 14, 1293-301.

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

Cross-Reactivity Key

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

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