

#11939 Store at -20°C

## Oligophrenin-1 Antibody



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<b>Applications:</b> WB	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 92	<b>Source:</b> Rabbit	<b>UniProt ID:</b> #O60890	<b>Entrez-Gene Id:</b> 4983
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<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	Oligophrenin-1 Antibody recognizes endogenous levels of total Oligophrenin-1 protein.	
<b>Source / Purification</b>	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.	
<b>Background</b>	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).	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Billuart, P. et al. (1998) <i>Nature</i> 392, 923-6.</li> <li>2. Khelifaoui, M. et al. (2007) <i>J Neurosci</i> 27, 9439-50.</li> <li>3. Nakano-Kobayashi, A. et al. (2009) <i>Curr Biol</i> 19, 1133-9.</li> <li>4. Govek, E.E. et al. (2004) <i>Nat Neurosci</i> 7, 364-72.</li> <li>5. Valnegri, P. et al. (2011) <i>Nat Neurosci</i> 14, 1293-301.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	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.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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