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Oligophrenin 1 Rabbit pAb

Catalog # AP98048

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O60890
Other Accession	O60890
Reactivity	Rat
Predicted	Human, Mouse, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	91641
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Oligophrenin 1
Epitope Specificity	418-465/802
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 PH domain. Contains 1 Rho-GAP domain.
SUBUNIT	Interacts with HOMER1. Interacts with AMPA receptor complexes. Interacts with SH3GL2 (endophilin-A1)
DISEASE	Defects in OPHN1 are the cause of mental retardation X-linked OPHN1-related (MRXSO) [MIM:300486]; formerly designated MRX60. MRXSO is a syndromic mental retardation. Patients present mental retardation associated with cerebellar hypoplasia and distinctive facial dysmorphism.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Ras p21 can exist in either a physiologically quiescent GDP-binding state or a GTP-binding signal-emitting state (1,2). Interaction of Ras p21 with GTPase activating protein (GAP) can increase the rate of hydrolysis of Ras p21-bound GTP by as much as 1000-fold (3). In mitogenically activated and tyrosine kinase-transformed cells, Ras GAP forms a complex with a protein designated p190 (4). At its amino terminus, p190 contains sequence motifs characteristic of all known GTPases, whereas the carboxy terminus contains sequences similar to those found in the Bcr gene product, n-chimerin and Rho GAP, all of which exhibit intrinsic GAP activity (4,5). Oligophrenein-1 is an additional protein with GTPase activating activity. Oligophrenein-1 is a RhoGAP protein that stimulates GTP hydrolysis of Rho subfamily members and is involved in cell migration, morphogenesis and axon outgrowth (6).

Additional Information

Gene ID	4983
Other Names	ARHGAP41; MRX60; MRXSBL; OPN1; OPHN1_HUMAN; OPHN1; oligophrenin 1; mental retardation, X-linked 60

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	OPHN1
Function	Stimulates GTP hydrolysis of members of the Rho family. Its action on RHOA activity and signaling is implicated in growth and stabilization of dendritic spines, and therefore in synaptic function. Critical for the stabilization of AMPA receptors at postsynaptic sites. Critical for the regulation of synaptic vesicle endocytosis at presynaptic terminals. Required for the localization of NR1D1 to dendrites, can suppress its repressor activity and protect it from proteasomal degradation (By similarity).
Cellular Location	Postsynapse {ECO:0000250|UniProtKB:P0CAX5}. Presynapse {ECO:0000250|UniProtKB:P0CAX5}. Cell projection, axon {ECO:0000250|UniProtKB:P0CAX5}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:P0CAX5}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q99J31}. Cytoplasm {ECO:0000250|UniProtKB:Q99J31}
Tissue Location	Expressed in brain.

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