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[Primary Antibody]

Rabbit Anti-CADPS2 antibody

Catalog Number: SL11500R

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	CADPS2
Immunogen:	KLH conjugated synthetic peptide derived from human CADPS2: 435-510/1296
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Applications:	ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted:Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep)
Predicted MW.:	148kDa
Subcellular Location:	cytoplasmic The cell membrane
Background:	Calcium-dependent secretion activators (CAPS-1 and CAPS-2) are calcium-binding proteins that direct neurotransmitter and neuropeptide-filled vesicles to the cell membrane for secretory granule exocytosis. Both CAPS-1 and CAPS-2 are expressed primarily in the brain where they regulate the secretion of various substances. The CAPS proteins contain a PH domain that is essential for regulation of exocytosis, as well as regulation of phospholipid binding. Through their regulation of neurotrophin release from granule cells, CAPS proteins help to regulate cell fate during neuronal development. CAPS-1 is thought to regulate catecholamine release from neuronal cells, while CAPS-2 is thought to regulate release of both brain-derived neurotrophic factor and neurotrophin-3 from granule cells. Defects in the genes encoding CAPS-1 and CAPS-2 are implicated in impaired cerebral development and autism. **Function:** RelevanceCADPS2 (Ca2+-dependent activator protein for secretion) belongs to the CAPS/Cadps family and consists of two members,

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	CAPS1 and CAPS2. Both members play an important role in secretory granule exocytosis. CADPS2 is involved in the release of two neurotrophins, brain-derived neurotrophic factor and neurotrophin-3, from parallel fibers of cerebellar granule cells. CAPS proteins are expressed predominantly in the brain. CADPS2 has been found in various brain regions including the olfactory bulb, cerebrum, hippocampal formation, thalamus, mesencephalic tegmentum, cerebellum, medulla and spinal cord. CADPS2 colocalizes with proteins related to exocytosis (VAMP and SNAP-25) and endocytosis (Dynamin I) in the cell soma and processes of the mesencephalic tegmentum and cerebellum. **Subunit:** Homodimer (By similarity). Interacts with the dopamine receptor DRD2. **Subcellular Location:** Cytoplasmic vesicle membrane; Peripheral membrane protein; Cytoplasmic side (Potential). Cell junction, synapse. Note=Membrane-associated to vesicles. Strongly enriched in synaptic fractions. Probably localizes to different vesicles compared to CADPS. Enriched on vesicular structures in the parallel fiber terminal of granule cells that are distinct from synaptic vesicles. **Tissue Specificity:** Widely expressed. Expressed in all adult and fetal tissues examined, with the strongest expression in kidney and pancreas. In brain, it is expressed at high levels in cerebellum, to a lesser degree in cerebral cortex, occipital pole, and frontal and temporal lobes. Only weakly expressed in medulla, spinal cord and putamen. **Post-translational modifications:** Isoform 2 is phosphorylated upon DNA damage, probably by ATM or ATR. **Similarity:** Contains 1 C2 domain. Contains 1 MHD1 (MUNC13 homology domain 1) domain. Contains 1 PH domain. **Database links:** **Entrez Gene:** 93664 Human **Entrez Gene:** 320405 Mouse **Entrez Gene:** 312166 Rat Omim: 609978 Human **SwissProt:** Q86UW7 Human **SwissProt:** Q8BYR5 Mouse **Unigene:** 126730 Human **Unigene:** 379572 Mouse

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