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Cytohesin 2 Rabbit pAb

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Catalog # AP55021

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q99418
Reactivity	Human, Rat
Predicted	Mouse, Chicken, Dog, Pig, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46546
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Cytohesin 2
Epitope Specificity	21-120/400
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell membrane. Cytoplasm. Note=Both isoform 1 and isoform 2 are recruited to the cell membrane through its association with ARL4A, ARL4C and ARL4D. Requires also interaction with phosphoinositides for targeting to plasma membrane.
SIMILARITY	Contains 1 PH domain. Contains 1 SEC7 domain.
SUBUNIT	Heteromer. Composed of GRASP, CYTH2 and at least one GRM1 (By similarity). Interacts with ARRB1. Interacts with ARL4D; the interaction is direct.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The ADP-ribosylation factor (Arf) family comprises a group of structurally and functionally conserved 21 kDa proteins, which are members of the Ras superfamily of regulatory GTP-binding proteins. Arf is involved in intracellular protein traffic to and within the Golgi complex. Arf has a number of disparate activities including maintenance of organelle integrity, assembly of coat proteins, as a co-factor for cholera toxin and as an activator of phospholipase D. Like other small GTPases, Arf is found to be active when bound to GTP and inactive when bound to GDP. Arf's activation is dependent upon guanine nucleotide exchange factors (GEFs) which increase the rate of exchange of bound GDP with GTP. All GEFs have a highly conserved Sec7 domain. GEF activity lies in the Sec7 domain and this activity has been shown to be inhibited by the fungal metabolite brefeldin-A (BFA). A small group of GEFs which are insensitive to brefeldin-A (BFA) include cytohesin-1 (B2-1), cytohesin-2 (ARNO), cytohesin-3 (ARNO3), and cytohesin-4. All cytohesins function in the cell periphery and contain a pleckstrin homology (PH) domain. The PH domain has been shown to interact with phosphatidylinositol 3,4,5-triphosphate and is believed to promote membrane targeting of the cytohesins. Recruitment of the cytohesins to the membranes can occur in response to tyrosine kinase receptor activation. This response appears to require the activation of phosphatidylinositol 3-kinase (PI 3-kinase).

Additional Information

Gene ID	9266
Other Names	Cytohesin-2, ARF exchange factor, ARF nucleotide-binding site opener, Protein ARNO, PH, SEC7 and coiled-coil domain-containing protein 2, CYTH2 (HGNC:9502), ARNO, PSCD2, PSCD2L
Target/Specificity	Ubiquitous.
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

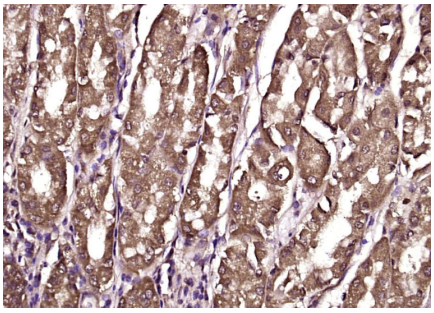
Name	CYTH2 (HGNC:9502)
Synonyms	ARNO, PSCD2, PSCD2L
Function	Acts as a guanine-nucleotide exchange factor (GEF). Promotes guanine-nucleotide exchange on ARF1, ARF3 and ARF6. Activates ARF factors through replacement of GDP with GTP (By similarity). The cell membrane form, in association with ARL4 proteins, recruits ARF6 to the plasma membrane (PubMed:17398095). Involved in neurite growth (By similarity).
Cellular Location	Cell membrane; Peripheral membrane protein. Cytoplasm. Cell projection {ECO:0000250|UniProtKB:P63034}. Cell projection, growth cone {ECO:0000250|UniProtKB:P63034}. Cell junction, tight junction {ECO:0000250|UniProtKB:P63034}. Cell junction, adherens junction {ECO:0000250|UniProtKB:P63034}. Note=Both isoform 1 and isoform 2 are recruited to the cell membrane through its association with ARL4A, ARL4C and ARL4D. They require also interaction with phosphoinositides for targeting to plasma membrane (PubMed:17398095). In differentiating neuroblastoma cells, colocalizes with CCDC120 in both neurite shaft and growth cone areas. {ECO:0000250|UniProtKB:P63034, ECO:0000269|PubMed:17398095}
Tissue Location	Widely expressed..

Background

The ADP-ribosylation factor (Arf) family comprises a group of structurally and functionally conserved 21 kDa proteins, which are members of the Ras superfamily of regulatory GTP-binding proteins. Arf is involved in intracellular protein traffic to and within the Golgi complex. Arf has a number of disparate activities including maintenance of organelle integrity, assembly of coat proteins, as a co-factor for cholera toxin and as an activator of phospholipase D. Like other small GTPases, Arf is found to be active when bound to GTP and inactive when bound to GDP. Arf's activation is dependent upon guanine nucleotide exchange factors (GEFs) which increase the rate of exchange of bound GDP with GTP. All GEFs have a highly conserved Sec7 domain. GEF activity lies in the Sec7 domain and this activity has been shown to be inhibited by the fungal metabolite brefeldin-A (BFA). A small group of GEFs which are insensitive to brefeldin-A (BFA) include cytohesin-1 (B2-1), cytohesin-2 (ARNO), cytohesin-3 (ARNO3), and cytohesin-4. All cytohesins function in the cell periphery and contain a pleckstrin homology (PH) domain. The PH domain has been shown to interact with phosphatidylinositol 3,4,5-triphosphate and is believed to promote membrane targeting of the

cytohesins. Recruitment of the cytohesins to the membranes can occur in response to tyrosine kinase receptor activation. This response appears to require the activation of phosphatidylinositol 3-kinase (PI 3-kinase).

Images



Paraformaldehyde-fixed, paraffin embedded (Human stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Cytohesin 2) Polyclonal Antibody, Unconjugated (AP55021) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.