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PDCD6 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP19928a

Product Information

Application	WB, E
Primary Accession	O75340
Other Accession	NP_037364.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB41816
Calculated MW	21868
Antigen Region	19-47

Additional Information

Gene ID	10016
Other Names	Programmed cell death protein 6, Apoptosis-linked gene 2 protein, Probable calcium-binding protein ALG-2, PDCD6, ALG2
Target/Specificity	This PDCD6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 19-47 amino acids from the N-terminal region of human PDCD6.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PDCD6 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDCD6
Synonyms	ALG2 {ECO:0000250|UniProtKB:P12815}
Function	Calcium sensor that plays a key role in processes such as endoplasmic

reticulum (ER)-Golgi vesicular transport, endosomal biogenesis or membrane repair. Acts as an adapter that bridges unrelated proteins or stabilizes weak protein-protein complexes in response to calcium: calcium-binding triggers exposure of apolar surface, promoting interaction with different sets of proteins thanks to 3 different hydrophobic pockets, leading to translocation to membranes (PubMed:20691033, PubMed:25667979). Involved in ER-Golgi transport by promoting the association between PDCD6IP and TSG101, thereby bridging together the ESCRT-III and ESCRT-I complexes (PubMed:19520058). Together with PEF1, acts as a calcium-dependent adapter for the BCR(KLHL12) complex, a complex involved in ER-Golgi transport by regulating the size of COPII coats (PubMed:27716508). In response to cytosolic calcium increase, the heterodimer formed with PEF1 interacts with, and bridges together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export, which is required for neural crest specification (PubMed:27716508). Involved in the regulation of the distribution and function of MCOLN1 in the endosomal pathway (PubMed:19864416). Promotes localization and polymerization of TFG at endoplasmic reticulum exit site (PubMed:27813252). Required for T-cell receptor-, Fas-, and glucocorticoid-induced apoptosis (By similarity). May mediate Ca(2+)-regulated signals along the death pathway: interaction with DAPK1 can accelerate apoptotic cell death by increasing caspase-3 activity (PubMed:16132846). Its role in apoptosis may however be indirect, as suggested by knockout experiments (By similarity). May inhibit KDR/VEGFR2-dependent angiogenesis; the function involves inhibition of VEGF-induced phosphorylation of the Akt signaling pathway (PubMed:21893193). In case of infection by HIV-1 virus, indirectly inhibits HIV-1 production by affecting viral Gag expression and distribution (PubMed:27784779).

Cellular Location

Endoplasmic reticulum membrane; Peripheral membrane protein. Cytoplasmic vesicle, COPII-coated vesicle membrane. Cytoplasm. Nucleus. Endosome Note=Interaction with RBM22 induces relocalization from the cytoplasm to the nucleus (PubMed:17045351). Translocated from the cytoplasm to the nucleus after heat shock cell treatment. Accumulates in cytoplasmic vesicle-like organelles after heat shock treatment, which may represent stress granules (PubMed:21122810). In response to calcium increase, relocates from cytoplasm to COPII vesicle coat (PubMed:27716508) Localizes to endoplasmic reticulum exit site (ERES) (PubMed:27813252)

Background

This gene encodes a calcium-binding protein belonging to the penta-EF-hand protein family. Calcium binding is important for homodimerization and for conformational changes required for binding to other protein partners. This gene product participates in T cell receptor-, Fas-, and glucocorticoid-induced programmed cell death. In mice deficient for this gene product, however, apoptosis was not blocked suggesting this gene product is functionally redundant.

References

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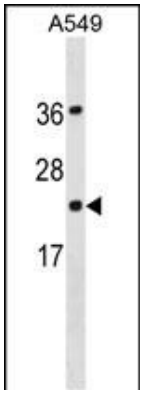
Suzuki, H., et al. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 64 (PT 11), 974-977 (2008) :
Yamada, Y., et al. Cancer Sci. 99(11):2193-2199(2008)
Suzuki, H., et al. Structure 16(10):1562-1573(2008)

Images



PDCD6 Antibody (N-term) (Cat. #AP19928a) western blot analysis in A549 cell line lysates (35ug/lane).This demonstrates the PDCD6 antibody detected the PDCD6 protein (arrow).