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PDCD6 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP20782c

Product Information

Application	WB, E
Primary Accession	O75340
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB49787
Calculated MW	21868

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 a rabbit immunized with a KLH conjugated synthetic peptide between 103-137 amino acids from the Central 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 (Center) 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)

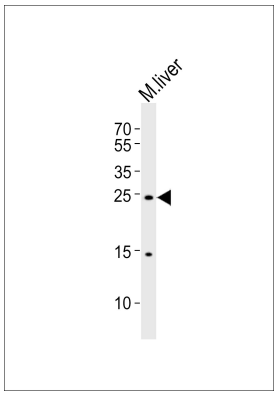
Background

Calcium-binding protein required for T-cell receptor-, Fas-, and glucocorticoid-induced cell death. May mediate Ca(2+)- regulated signals along the death pathway (By similarity). Calcium-dependent adapter necessary for the association between PDCD6IP and TSG101. Interaction with DAPK1 can accelerate apoptotic cell death by increasing caspase-3 activity. May inhibit KDR/VEGFR2-dependent angiogenesis; the function involves inhibition of VEGF-induced phosphoprylation of the Akt signaling pathway. Seems to play a role in the regulation of the distribution and function of MCOLN1 in the endosomal pathway. Isoform 2 has a lower Ca(2+) affinity than isoform 1. Isoform 1 and, to a lesser extend, isoform 2, can stabilize SHISA5.

References

Ganjei J.K.,et al.Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases.
Urcelay E.,et al.Submitted (MAY-1996) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
Schmutz J.,et al.Nature 431:268-274(2004).

Images



Western blot analysis of lysate from mouse liver tissue lysate, using PDCD6 Antibody (Center)(Cat. #AP20782c). AP20782c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.