10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PDCD6 Blocking Peptide (Center)
Synthetic peptide
Catalog # BP20782c

Specification

PDCD6 Blocking Peptide (Center) - Product Information

Primary Accession	O75340
Other Accession	P12815

PDCD6 Blocking Peptide (Center) - 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
The synthetic peptide sequence is selected from aa 103-117 of HUMAN PDCD6

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PDCD6 Blocking Peptide (Center) - 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)

PDCD6 Blocking Peptide (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

PDCD6 Blocking Peptide (Center) - Images

PDCD6 Blocking Peptide (Center) - 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.

PDCD6 Blocking Peptide (Center) - 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).