

PDCD6 Blocking Peptide (N-term)
Synthetic peptide
Catalog # BP19928a**Specification**

PDCD6 Blocking Peptide (N-term) - Product Information

Primary Accession [O75340](#)
Other Accession [NP_037364.1](#)

PDCD6 Blocking Peptide (N-term) - 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 34-47 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 (N-term) - 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 (N-term) - Protocols

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

- [Blocking Peptides](#)

PDCD6 Blocking Peptide (N-term) - Images

PDCD6 Blocking Peptide (N-term) - 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.

PDCD6 Blocking Peptide (N-term) - References

Vergarajauregui, S., et al. J. Biol. Chem. 284(52):36357-36366(2009)
Okumura, M., et al. Biochem. Biophys. Res. Commun. 386(1):237-241(2009)
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Yamada, Y., et al. Cancer Sci. 99(11):2193-2199(2008)
Suzuki, H., et al. Structure 16(10):1562-1573(2008)