Recombinant PDCD6 protein (His tag)

Catalog Number	539548
Synonyms	Apoptosis-linked gene 2 protein homolog; ALG-2
Species	Human
Expression System	E. coli
Accession	O75340
Molecular Weight	Predictes a molecular mass of 23.39 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	2-191
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-191 aa (O75340) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Programmed Cell Death Protein 6 (PDCD6/ALG-2) Fragment (aa 2-191) is a high-purity calcium-sensing protein that encompasses all five EF-hand domains. This fragment serves as an essential tool for studying calcium-dependent processes in vesicular transport, endosomal biogenesis, and apoptosis regulation, providing researchers with a functional domain-specific reagent for mechanistic investigations. Programmed Cell Death Protein 6 (PDCD6), also known as ALG-2, functions as a crucial calcium sensor in human cells that coordinates multiple cellular processes through calcium-dependent protein interactions. The full-length protein acts as an adapter that bridges unrelated proteins or stabilizes weak protein-protein complexes in response to calcium signaling, leading to translocation to membranes. Key functions include facilitating endoplasmic reticulum-Golgi vesicular transport by promoting association between PDCD6IP and TSG101, regulating COPII coat size through interaction with the BCR(KLHL12) complex, and modulating endosomal pathway function through MCOLN1 regulation. PDCD6 localizes to multiple cellular compartments including endoplasmic reticulum membranes, COPII-coated vesicles, cytoplasm, nucleus, and endosomes, with translocation between compartments in response to calcium signaling and cellular stress. While originally identified for its role in apoptosis, current evidence suggests its apoptotic function may be indirect, with primary roles in membrane trafficking and cellular signaling pathways.