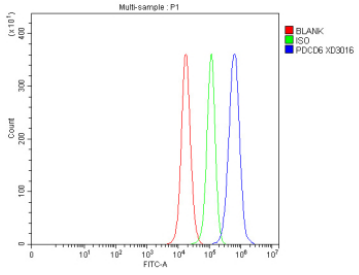
PDCD6 Antibody / Programmed cell death protein 6 (FY13438)

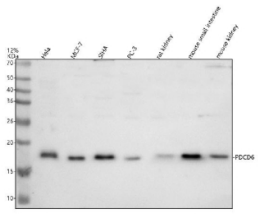
Catalog No.	Formulation	Size
FY13438	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
UniProt	O75340
Localization	Cytoplasm, Nucleus
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This PDCD6 antibody is available for research use only.



Flow cytometry analysis of fixed human PC-3 cells with PDCD6 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= PDCD6 antibody.



Western blot analysis of Programmed cell death protein 6 using PDCD6 antibody. Lane 1: human HeLa whole cell lysates; Lane 2: human MCF-7 whole cell lysates; Lane 3: human SiHa whole cell lysates; Lane 4: human PC-3 whole cell lysates; Lane 5: rat kidney tissue lysates; Lane 6: mouse small intestine tissue lysates; Lane 7: mouse kidney tissue lysates. A predominant band is detected at approximately 17 kDa across multiple samples. Although the predicted molecular weight of PDCD6 is ~22 kDa, PDCD6 is known to migrate at a lower apparent molecular weight on SDS-PAGE, likely due to its compact structure and calcium-binding EF-hand domains. The observed banding pattern is consistent with detection of PDCD6 in both human and rodent samples.

Description

PDCD6 antibody targets Programmed cell death protein 6, encoded by the PDCD6 gene. Programmed cell death protein 6, also known as ALG-2, is a calcium-binding protein that belongs to the penta-EF-hand family. It is predominantly localized in the cytoplasm and nucleus and functions as a calcium-dependent signaling adaptor rather than a classical enzyme. PDCD6 was originally identified through its involvement in apoptosis-related pathways but is now recognized as a broader regulator of intracellular signaling and membrane trafficking.

Functionally, Programmed cell death protein 6 responds to changes in intracellular calcium levels and undergoes conformational changes that enable interactions with multiple partner proteins. Through these interactions, PDCD6 participates in processes such as apoptosis regulation, vesicle trafficking, and endosomal sorting. It has been shown to associate with components of the ESCRT machinery and other signaling proteins, linking calcium signaling to membrane dynamics. A PDCD6 antibody supports studies focused on calcium-dependent signaling and apoptotic regulation.

PDCD6 is widely expressed across tissues and cell types, reflecting its involvement in fundamental cellular processes. Its activity is particularly relevant in cells undergoing dynamic calcium signaling or stress responses. Subcellular localization of PDCD6 can vary depending on calcium availability and interacting partners, allowing it to act as a flexible signaling mediator within the cell.

From a disease-relevance perspective, Programmed cell death protein 6 has been investigated in cancer, immune regulation, and neurodegenerative conditions. Altered PDCD6 expression or signaling has been associated with changes in apoptosis sensitivity, tumor progression, and inflammatory responses. These findings highlight PDCD6 as a protein of interest in studies examining how calcium-dependent pathways influence disease-associated cellular behavior.

At the molecular level, Programmed cell death protein 6 contains multiple EF-hand motifs that coordinate calcium binding and protein-protein interactions. Calcium-dependent conformational changes and post-translational regulation can influence its apparent behavior in biochemical assays without altering the primary amino acid sequence. PDCD6 antibody reagents support research applications focused on apoptosis, calcium signaling, and intracellular trafficking, with NSJ Bioreagents providing reagents intended for research use.

Application Notes

Optimal dilution of the PDCD6 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the N-terminus of human Programmed cell death protein 6 protein was used as the immunogen for the PDCD6 antibody.

Storage

After reconstitution, the PDCD6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.