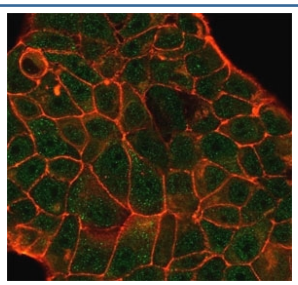
DCP2 Antibody / mRNA Decapping Enzyme Antibody [clone PCRP-DCP2-1D6] (V9621)

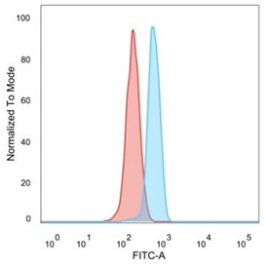
Catalog No.	Formulation	Size
V9621-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9621-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9621SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

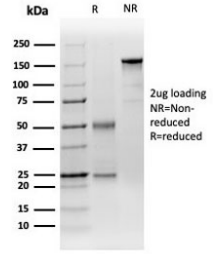
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a
Clone Name	PCRP-DCP2-1D6
Purity	Protein A/G affinity
UniProt	Q8IU60
Localization	Nucleus, Cytoplasm
Applications	Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-2ug/ml
Limitations	This DCP2 Antibody / mRNA Decapping Enzyme Antibody is available for research use only.



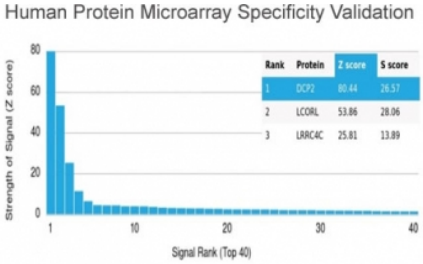
DCP2 Antibody MCF-7 Cell IF. Immunofluorescence analysis of PFA-fixed human MCF-7 cells using DCP2 Antibody (clone PCRP-DCP2-1D6, green) shows punctate cytoplasmic staining consistent with DCP2 / Decapping protein 2 localization in RNA processing bodies (P-bodies). Phalloidin (red) highlights the actin cytoskeleton, providing structural context relative to the DCP2 signal. The distribution pattern supports detection of this mRNA decapping enzyme involved in RNA turnover and post-transcriptional regulation.



DCP2 Antibody HeLa Cell FACS. Flow cytometry analysis of PFA-fixed human HeLa cells using DCP2 Antibody (clone PCRP-DCP2-1D6, blue) shows a clear rightward shift relative to unstained cells (red), indicating detection of DCP2 / Decapping protein 2 expression. The intracellular signal is consistent with cytoplasmic localization of this mRNA decapping enzyme involved in RNA turnover and post-transcriptional regulation pathways.



SDS-PAGE analysis of purified, BSA-free Decapping Protein 2 antibody (clone PCRP-DCP2-1D6) as confirmation of integrity and purity.



DCP2 Antibody HuProt Microarray Specificity. Protein microarray analysis using DCP2 Antibody (clone PCRP-DCP2-1D6) shows strongest binding to DCP2 / Decapping protein 2, with the target ranked as the top hit on the array. Additional signals are observed for non-target proteins with lower intensity, indicating preferential binding to DCP2 relative to other proteins tested. Z score represents the strength of signal in standard deviations above the mean of all array signals, while S score reflects the separation between ranked targets and provides a measure of relative specificity.

Description

Decapping protein 2 (DCP2) is a key cytoplasmic enzyme that catalyzes the removal of the 5' cap structure from messenger RNA, a critical step in mRNA degradation and turnover. The DCP2 Antibody / mRNA Decapping Enzyme Antibody is designed to detect this central regulator of RNA stability in biological systems where gene expression control and RNA processing are of interest. DCP2 is encoded on chromosome 5q22 and functions as the catalytic core of the mRNA decapping complex. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

The DCP2 antibody, also referred to as Decapping protein 2 antibody in the literature, recognizes a protein that localizes primarily to the cytoplasm, where it is enriched in processing bodies (P-bodies). These cytoplasmic RNA granules serve as sites of mRNA storage, degradation, and translational repression. DCP2 works in coordination with cofactors such as DCP1 and other decapping activators to regulate the stability and turnover of mRNA transcripts.

This DCP2 Antibody / mRNA Decapping Enzyme Antibody is uniquely positioned for studies of post-transcriptional gene regulation and RNA metabolism. By controlling the removal of the 5' cap, DCP2 commits mRNA molecules to degradation, thereby influencing gene expression levels and cellular responses to environmental and developmental cues. In immunofluorescence applications, DCP2 is often observed as punctate cytoplasmic staining corresponding to P-bodies, while western blot analysis detects the protein at its expected molecular weight in a variety of cell types.

DCP2 plays an important role in multiple biological processes, including stress responses, cell differentiation, and maintenance of RNA homeostasis. Dysregulation of mRNA decay pathways has been linked to cancer, viral infection, and neurodegenerative disease, where altered RNA stability can impact protein expression and cellular function. As a result, DCP2 serves as a key marker for studying RNA turnover and post-transcriptional control mechanisms.

The mouse monoclonal clone PCRP-DCP2-1D6 provides consistent detection of DCP2 in research applications focused on RNA processing and mRNA decay. This DCP2 Antibody / mRNA Decapping Enzyme Antibody is suitable for detecting

DCP2 expression in studies of gene regulation, RNA granule biology, and cellular stress responses. Its performance supports detailed evaluation of mRNA turnover pathways in both normal and disease-associated contexts.

This antibody supports investigation of mRNA decay, RNA processing, and post-transcriptional regulation involving DCP2.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the DCP2 Antibody / mRNA Decapping Enzyme Antibody should be determined by the researcher.

Immunogen

Recombinant full-length human protein was used as the immunogen for the Decapping Protein 2 antibody.

Storage

Aliquot the Decapping Protein 2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

DCP2 antibody, Decapping protein 2 antibody, mRNA decapping enzyme antibody, DCP2 RNA processing antibody, DCP2 P-body protein antibody