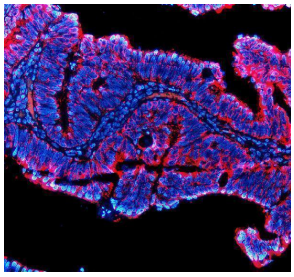
PDE6D Antibody / Phosphodiesterase 6D Antibody (FY13531)

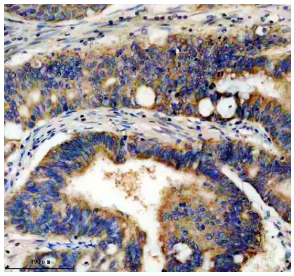
Catalog No.	Formulation	Size
FY13531	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

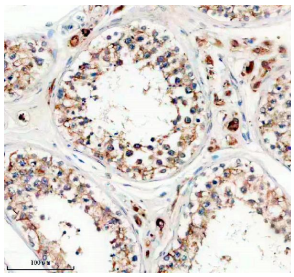
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O43924
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	The PDE6D Antibody / Phosphodiesterase 6D Antibody is available for research use only.



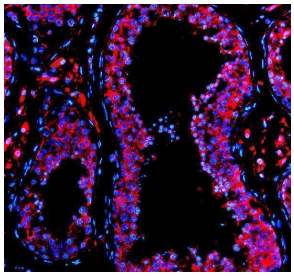
PDE6D Antibody by IF in human colon carcinoma. Immunofluorescence staining of a paraffin-embedded human colon carcinoma section with Phosphodiesterase 6D Antibody reveals red fluorescence within glandular epithelial structures, with blue DAPI nuclear counterstaining. Antigen retrieval was performed in EDTA buffer at pH 8.0. Sections were blocked with 10% goat serum and incubated with primary antibody at 5 ug/mL overnight at 4oC. Cy3-conjugated secondary antibody was applied at 1:500 for 30 minutes at 37oC. The image illustrates PDE6D-associated immunoreactivity in the epithelial tumor compartment.



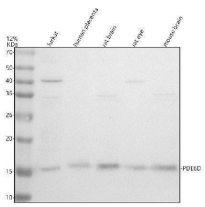
PDE6D Antibody by IHC in human colon carcinoma. Immunohistochemistry of paraffin-embedded human colon carcinoma using Phosphodiesterase 6D Antibody demonstrates brown staining in gland-forming tumor epithelium, with hematoxylin highlighting cell nuclei. Sections underwent heat-mediated antigen retrieval in EDTA buffer at pH 8.0, followed by blocking with 10% goat serum. Primary antibody was applied at 2 ug/mL overnight at 4oC. Bound antibody was detected with a peroxidase-conjugated secondary reagent and DAB chromogen. The epithelial staining pattern provides tissue-level evidence of PDE6D immunoreactivity.



PDE6D Antibody by IHC in human testis. Immunohistochemistry of paraffin-embedded human testis with Phosphodiesterase 6D Antibody shows brown immunoreactivity in cells lining seminiferous tubules, against blue hematoxylin-counterstained nuclei. Heat-mediated epitope retrieval used EDTA buffer at pH 8.0. Sections were blocked with 10% goat serum and incubated with primary antibody at 2 ug/mL overnight at 4oC, followed by peroxidase-based detection with DAB. This tissue preparation demonstrates PDE6D-associated staining within the seminiferous epithelium.



PDE6D Antibody by IF in human testis. Immunofluorescence analysis of paraffin-embedded human testis using Phosphodiesterase 6D Antibody shows red fluorescence distributed among cells of the seminiferous tubules, with DAPI-stained nuclei appearing blue. EDTA buffer at pH 8.0 was used for antigen retrieval, followed by 10% goat serum blocking. Primary antibody was incubated at 5 ug/mL overnight at 4oC and detected with Cy3-conjugated secondary antibody at 1:500. The fluorescence signal illustrates the distribution of PDE6D immunoreactivity in testicular tissue.



PDE6D Antibody by WB in human and rodent samples. Western blot analysis using Phosphodiesterase 6D Antibody detects a principal band near 15-17 kDa in human Jurkat cells (lane 1), human placenta (lane 2), rat brain (lane 3), rat eye (lane 4), and mouse brain (lane 5). The observed migration is close to the calculated 17.4 kDa mass of PDE6D. Reduced lysates containing 30 ug protein per lane were separated by 12% SDS-PAGE and transferred to nitrocellulose. The primary antibody was incubated at 0.5 ug/mL overnight at 4oC, followed by HRP-conjugated secondary antibody and chemiluminescent detection.

Description

PDE6D Antibody / Phosphodiesterase 6D Antibody detects PDE6D, a prenyl-binding protein historically named the delta subunit of phosphodiesterase 6. Despite its name, PDE6D is not itself a catalytic cyclic nucleotide phosphodiesterase. Instead, it binds lipid-modified proteins and facilitates their movement between cellular membranes and the cytosol. Prenylation adds hydrophobic isoprenoid groups to selected proteins, promoting membrane association but also creating a need for mechanisms that control their intracellular distribution. PDE6D provides one such mechanism by accommodating prenyl groups within a hydrophobic binding pocket.

PDE6D interacts with several prenylated signaling proteins, including members of the Ras and Rab-related networks in specific contexts. By solubilizing prenylated cargo, it helps regulate the cycling of these proteins between membrane compartments. Cargo release is influenced by the small GTPase ARL2 or related factors, which alter the binding properties of PDE6D. The resulting transport cycle can affect where signaling proteins accumulate and therefore where they exert their functions. This makes PDE6D an important contributor to spatial organization rather than a direct enzyme controlling second-messenger breakdown.

Proper membrane targeting is essential for signaling specificity, especially when closely related proteins act at different cellular locations. Disruption of prenylated cargo transport can change protein localization and downstream signaling outputs. PDE6D has attracted interest because its interactions with prenylated proteins influence pathways involved in cell growth and intracellular trafficking. The Phosphodiesterase 6D Antibody designation reflects the historical protein name, but its principal characterized role is as a prenyl-binding transport factor. NSJ Bioreagents offers the PDE6D Antibody for this distinctive regulator of intracellular protein localization. A PDE6D Antibody is relevant to understanding the molecular functions and regulatory pathways associated with PDE6D.

Explore related research targets in our Metabolism Antibody / Metabolism Antibodies collection.

Application Notes

The recommended approach is to establish the optimal working dilution of the PDE6D Antibody / Phosphodiesterase 6D Antibody through preliminary testing.

Immunogen

The PDE6D Antibody was generated using a synthetic peptide corresponding to a sequence at the N-terminus of human PDE6D.

Storage

The PDE6D Antibody is stable for up to one month at 4oC after reconstitution. For longer-term storage, aliquot and store at -20oC for up to six months. Do not repeatedly freeze and thaw.

Alternate Names

PDE6D antibody, Retinal rod rhodopsin-sensitive cGMP 3',5'-cyclic phosphodiesterase subunit delta antibody, Retinal rod rhodopsin-sensitive cGMP 3' antibody, 5'-cyclic phosphodiesterase subunit delta antibody, phosphodiesterase 6D antibody, PDED antibody, GMP-PDE delta antibody, Protein p17 antibody

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