

PDE6D (A-8): sc-376724

BACKGROUND

Phosphodiesterases (PDEs), also designated cyclic nucleotide phosphodiesterases, are important for the downregulation of the intracellular level of the second messenger cyclic adenosine monophosphate (cAMP) by hydrolyzing cAMP to 5'AMP. The PDE family contains proteins that serve tissue-specific roles in the regulation of lipolysis, glycogenolysis, myocardial contractility and smooth muscle relaxation. PDE6D, also designated phosphodiesterase 6D cGMP-specific rod δ , is a retina-specific oligomer composed of two catalytic chains (α and β), an inhibitory chain (γ) and the δ chain. It interacts with RPGR, ARL2 and ARL3, and contains 150 amino acids, which are unusually well conserved, with only a few conservative substitutions in human, bovine, mouse and rat PDE6D. The PDE6D protein contains two N-linked glycosylation sites.

REFERENCES

1. Florio, S.K., et al. 1996. Solubilization of membrane-bound rod phosphodiesterase by the rod recombinant δ subunit. *J. Biol. Chem.* 271: 24036-24047.
2. Ershova, G., et al. 1997. cDNA sequence, genomic organization and mapping of PDE6D, the human gene encoding the δ subunit of the cGMP phosphodiesterase of retinal rod cells to chromosome 2q36. *Cytogenet. Cell Genet.* 79: 139-141.

CHROMOSOMAL LOCATION

Genetic locus: PDE6D (human) mapping to 2q37.1; Pde6d (mouse) mapping to 1 D.

SOURCE

PDE6D (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-61 near the N-terminus of PDE6D of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PDE6D (A-8) is available conjugated to agarose (sc-376724 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376724 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376724 PE), fluorescein (sc-376724 FITC), Alexa Fluor® 488 (sc-376724 AF488), Alexa Fluor® 546 (sc-376724 AF546), Alexa Fluor® 594 (sc-376724 AF594) or Alexa Fluor® 647 (sc-376724 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376724 AF680) or Alexa Fluor® 790 (sc-376724 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376724 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PDE6D (A-8) is recommended for detection of PDE6D of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PDE6D (A-8) is also recommended for detection of PDE6D in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for PDE6D siRNA (h): sc-61309, PDE6D siRNA (m): sc-61310, PDE6D shRNA Plasmid (h): sc-61309-SH, PDE6D shRNA Plasmid (m): sc-61310-SH, PDE6D shRNA (h) Lentiviral Particles: sc-61309-V and PDE6D shRNA (m) Lentiviral Particles: sc-61310-V.

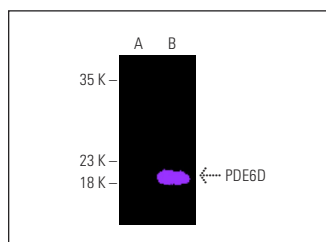
Molecular Weight of PDE6D: 17 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or PDE6D (m): 293T Lysate: sc-122458.

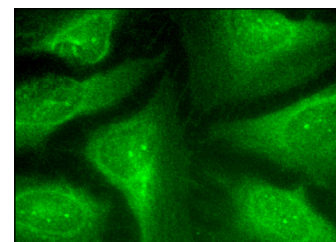
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PDE6D (A-8): sc-376724. Fluorescent western blot analysis of PDE6D expression in non-transfected: sc-117752 (A) and mouse PDE6D transfected: sc-122458 (B) 293T whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG κ BP-CFL 555: sc-516177.



PDE6D (A-8): sc-376724. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and nuclear localization.

SELECT PRODUCT CITATIONS

1. Siddiqui, F.A., et al. 2019. PDE6D inhibitors with a new design principle selectively block K-Ras activity. *ACS Omega* 5: 832-842.

RESEARCH USE

For research use only, not for use in diagnostic procedures.