

PDE6 β (B-8): sc-377486

BACKGROUND

Cyclic guanosine monophosphate (cGMP)-specific phosphodiesterase (PDE6) plays a crucial role in the phototransduction cascade in the vertebrate retina. The enzyme consists of an α and a β subunit, with catalytic and cGMP binding activity, respectively, as well as two inhibitory γ subunits and a δ subunit. PDE6 reduces intracellular cytoplasmic cGMP levels, specifically in photoreceptor cells. Mutations in the human PDE6A gene, which encodes the α subunit, account for roughly 3-4% of the cases of recessive retinitis pigmentosa (RP) in North America.

CHROMOSOMAL LOCATION

Genetic locus: PDE6B (human) mapping to 4p16.3; Pde6b (mouse) mapping to 5 F.

SOURCE

PDE6 β (B-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 779-811 near the C-terminus of PDE6 β 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.

PDE6 β (B-8) is available conjugated to agarose (sc-377486 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377486 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377486 PE), fluorescein (sc-377486 FITC), Alexa Fluor[®] 488 (sc-377486 AF488), Alexa Fluor[®] 546 (sc-377486 AF546), Alexa Fluor[®] 594 (sc-377486 AF594) or Alexa Fluor[®] 647 (sc-377486 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-377486 AF680) or Alexa Fluor[®] 790 (sc-377486 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377486 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PDE6 β (B-8) is recommended for detection of precursor and mature PDE6 β 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).

PDE6 β (B-8) is also recommended for detection of precursor and mature PDE6 β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDE6 β siRNA (h): sc-106850, PDE6 β siRNA (m): sc-152131, PDE6 β shRNA Plasmid (h): sc-106850-SH, PDE6 β shRNA Plasmid (m): sc-152131-SH, PDE6 β shRNA (h) Lentiviral Particles: sc-106850-V and PDE6 β shRNA (m) Lentiviral Particles: sc-152131-V.

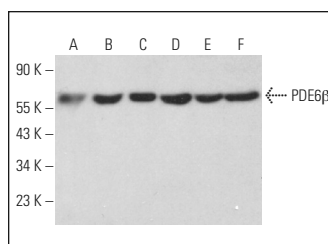
Molecular Weight of PDE6 β : 98 kDa.

Positive Controls: Neuro-2A whole cell lysate: sc-364185, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

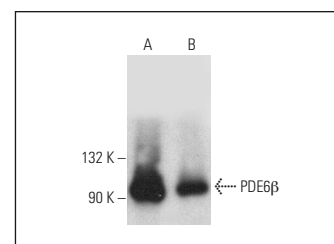
RECOMMENDED SUPPORT REAGENTS

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



PDE6 β (B-8): sc-377486. Western blot analysis of PDE6 β expression in HeLa (A), HEK293 (B), EOC 20 (C), Neuro-2A (D), NIH/3T3 (E) and PC-12 (F) whole cell lysates.



PDE6 β (B-8): sc-377486. Western blot analysis of PDE6 β expression in mouse eye (A) and human eye (B) tissue extracts.

SELECT PRODUCT CITATIONS

1. Bitoque, D.B. and Silva, G.A. 2018. Molecular biology tools for the study and therapy of PDE6 β mutations. *J. Biotechnol.* 284: 1-5.
2. Yang, J.M., et al. 2021. Long-term effects of human induced pluripotent stem cell-derived retinal cell transplantation in Pde6b knockout rats. *Exp. Mol. Med.* 53: 631-642.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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