

PDE4D (K-16): sc-25100

BACKGROUND

Phosphodiesterases (PDE) hydrolyze cAMP to 5'AMP and thus play a critical role in the regulation of intracellular cAMP. Division of the PDE superfamily by sequence homology and enzymatic properties yields 11 PDE families. A unique upstream conserved region (UCR) characterizes the PDE4 family. Four separate genes (A-D) encode the PDE4 enzymes, and alternative splicing generates short or long isoforms of each gene. Long PDE4 isoforms contain both UCR1 and UCR2 while short PDE4 isoforms possess only UCR2. Both UCR domains are necessary for dimerization of PDE4 isoforms. The human PDE4D gene maps to chromosome 5q11.2. The splice variants include isoforms PDE4D1-6.

CHROMOSOMAL LOCATION

Genetic locus: PDE4D (human) mapping to 5q11.2; Pde4d (mouse) mapping to 13 D2.1.

SOURCE

PDE4D (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PDE4D of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25100 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PDE4D (K-16) is recommended for detection of PDE4D of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

PDE4D (K-16) is also recommended for detection of PDE4D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PDE4D siRNA (h): sc-44004, PDE4D siRNA (m): sc-152130, PDE4D shRNA Plasmid (h): sc-44004-SH, PDE4D shRNA Plasmid (m): sc-152130-SH, PDE4D shRNA (h) Lentiviral Particles: sc-44004-V and PDE4D shRNA (m) Lentiviral Particles: sc-152130-V.

Molecular Weight of PDE4D isoforms 1 and 2: 68 kDa.

Molecular Weight of PDE4D isoform 3: 95 kDa.

Molecular Weight of PDE4D isoform 4: 119 kDa.

Molecular Weight of PDE4D isoform 5: 105 kDa.

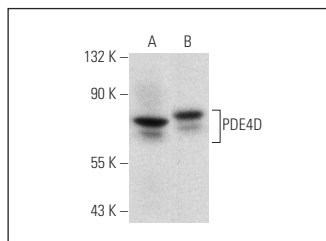
Molecular Weight of PDE4D isoform 6: 65 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, C6 whole cell lysate or L6 whole cell lysate: sc-364196.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PDE4D (K-16): sc-25100. Western blot analysis of PDE4D expression in C6 (A) and L6 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Levallet, G., et al. 2008. FSH-induced phosphoprotein phosphatase 2A-mediated deactivation of particulate phosphodiesterase-4 activities is abolished after alteration in proteoglycan synthesis in immature rat Sertoli cells. *J. Endocrinol.* 197: 45-54.
- Wang, X.M., et al. 2008. COX inhibitors downregulate PDE4D expression in a clinical model of inflammatory pain. *Clin. Pharmacol. Ther.* 84: 39-42.
- Dostaler-Touchette, V., et al. 2009. Cyclic adenosine monophosphate (cAMP)-specific phosphodiesterase is functional in bovine mammary gland. *J. Dairy Sci.* 92: 3757-3765.
- Dong, H., et al. 2010. Inhibition of PDE3, PDE4 and PDE7 potentiates glucocorticoid-induced apoptosis and overcomes glucocorticoid resistance in CEM T leukemic cells. *Biochem. Pharmacol.* 79: 321-329.

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 or our catalog for detailed protocols and support products.