

A cyclase VI (H-130): sc-25500

BACKGROUND

Adenylyl cyclases (A cyclases) function to convert ATP to cyclic AMP in response to activation by a variety of hormones, neurotransmitters and other regulatory molecules. Cyclic AMP, in turn, activates several other target molecules to control a broad range of diverse phenomena, such as metabolism, gene transcription and memory. A cyclases respond to receptor-initiated signals and are mediated by heterotrimeric G proteins which catalyze the exchange of GDP for GTP and activate A cyclase function. A cyclase VI, also known as ADCY6 (adenylate cyclase type 6), is a 1,168 amino acid A cyclase that localizes to the membrane and contains 2 guanylate cyclase domains. Using magnesium as a cofactor, A cyclase VI functions as a calcium-inhibitable A cyclase that catalyzes the conversion of ATP to 3',5'-cyclic AMP and diphosphate and plays a role in a variety of events throughout the body. Multiple isoforms of A cyclase VI exist due to alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: ADCY6 (human) mapping to 12q13.12; Adcy6 (mouse) mapping to 15 F1.

SOURCE

A cyclase VI (H-130) is a rabbit polyclonal antibody raised against amino acids 1-130 of A cyclase VI 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.

STORAGE

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

APPLICATIONS

A cyclase VI (H-130) is recommended for detection of A cyclase VI 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

A cyclase VI (H-130) is also recommended for detection of A cyclase VI in additional species, including canine.

Suitable for use as control antibody for A cyclase VI siRNA (h): sc-40321, A cyclase VI siRNA (m): sc-40322, A cyclase VI shRNA Plasmid (h): sc-40321-SH, A cyclase VI shRNA Plasmid (m): sc-40322-SH, A cyclase VI shRNA (h) Lentiviral Particles: sc-40321-V and A cyclase VI shRNA (m) Lentiviral Particles: sc-40322-V.

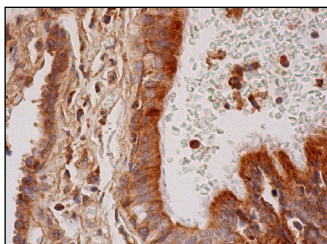
Molecular Weight of A cyclase VI: 132 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or C6 whole cell lysate: sc-364373.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



A cyclase VI (H-130): sc-25500. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic and membrane staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Bie, B., et al. 2005. cAMP-mediated mechanisms for pain sensitization during opioid withdrawal. *J. Neurosci.* 25: 3824-3832.
2. Tovey, S.C., et al. 2008. Selective coupling of type 6 adenylyl cyclase with type 2 IP3 receptors mediates direct sensitization of IP3 receptors by cAMP. *J. Cell Biol.* 183: 297-311.
3. Liu, X., et al. 2010. Fibroblast-specific expression of AC6 enhances β-adrenergic and prostacyclin signaling and blunts bleomycin-induced pulmonary fibrosis. *Am. J. Physiol. Lung Cell Mol. Physiol.* 298: L819-L829.
4. Bogard, A.S., et al. 2011. Human bronchial smooth muscle cells express adenylyl cyclase isoforms 2, 4, and 6 in distinct membrane microdomains. *J. Pharmacol. Exp. Ther.* 337: 209-217.

RESEARCH USE

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

MONOS
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Try **A cyclase V/VI (B-6): sc-514785**, our highly recommended monoclonal alternative to A cyclase VI (H-130).