

A cyclase VIII (H-270): sc-20764

BACKGROUND

Adenylyl cyclases function to convert ATP to cyclic AMP in response to activation by a variety of hormones, neurotransmitters and other regulatory molecules. Adenylyl cyclases respond to receptor-initiated signals, mediated by the G_s and G_i heterotrimeric G proteins. The binding of an agonist to a G_s -coupled receptor catalyzes the exchange of GDP (bound to $G_{\alpha s}$) for GTP, dissociation of GTP- $G_{\alpha s}$ from $G_{\beta\gamma}$ and $G_{\alpha s}$ -mediated activation of adenylyl cyclase. Adenylyl cyclase type VIII (A cyclase VIII) is one of the three mammalian calcium-stimulated isoforms, each of which is expressed in a region-specific manner in the central nervous system. In addition to the high expression in the brain, A cyclase VIII is also expressed in the lung. Ca^{2+} /calmodulin-dependent A cyclase VIII immunoreactivity is increased in alcoholic corpus amygdaloideum and hippocampus, suggesting that adenylyl cyclase may play a role in the pathophysiology of alcoholism. A significant decrease in the level of A cyclase I and a tendency to decrease in the level of A cyclase VIII in Alzheimer's disease hippocampus suggests that A cyclase I and VIII may play an essential role in learning and memory. A cyclase VIII knock-out mice do not have normal increases in behavioral markers of anxiety; thus, A cyclase VIII may also function in the modulation of anxiety.

CHROMOSOMAL LOCATION

Genetic locus: ADCY8 (human) mapping to 8q24.22; Adcy8 (mouse) mapping to 15 D1.

SOURCE

A cyclase VIII (H-270) is a rabbit polyclonal antibody raised against amino acids 561-830 mapping within an internal region of A cyclase VIII of human origin.

PRODUCT

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

APPLICATIONS

A cyclase VIII (H-270) is recommended for detection of A cyclase VIII of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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 VIII (H-270) is also recommended for detection of A cyclase VIII in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for A cyclase VIII siRNA (h): sc-40325, A cyclase VIII siRNA (m): sc-40326, A cyclase VIII shRNA Plasmid (h): sc-40325-SH, A cyclase VIII shRNA Plasmid (m): sc-40326-SH, A cyclase VIII shRNA (h) Lentiviral Particles: sc-40325-V and A cyclase VIII shRNA (m) Lentiviral Particles: sc-40326-V.

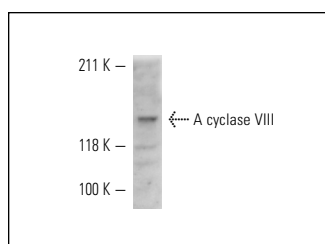
Molecular Weight of A cyclase VIII: 165 kDa.

Positive Controls: U-87 MG cell lysate: sc-2411, T98G cell lysate: sc-2294 or IMR-32 cell lysate: sc-2409.

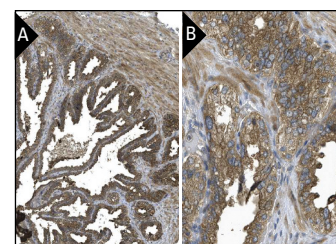
RECOMMENDED SECONDARY REAGENTS

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 VIII (H-270): sc-20764. Western blot analysis of A cyclase VIII expression in IMR-32 whole cell lysate.



A cyclase VIII (H-270): sc-20764. Immunoperoxidase staining of formalin fixed, paraffin-embedded human seminal vesicle tissue showing cytoplasmic and membrane staining of glandular cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

- Gueguen, M., et al. 2010. Implication of adenylyl cyclase 8 in pathological smooth muscle cell migration occurring in rat and human vascular remodeling. *J. Pathol.* 221: 331-342.
- Keuylia, Z., et al. 2012. The notch pathway attenuates interleukin 1 β (IL1 β)-mediated induction of adenylyl cyclase 8 (AC8) expression during vascular smooth muscle cell (VSMC) *trans*-differentiation. *J. Biol. Chem.* 287: 24978-24989.

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.

MONOS
Satisfaction
Guaranteed

Try **A cyclase VIII (B-6): sc-377323** or **A cyclase VIII (B-4): sc-377442**, our highly recommended monoclonal alternatives to A cyclase VIII (H-270).