

A cyclase IV (C-20): sc-589

BACKGROUND

Adenylyl 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. 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_{αs}) for GTP, the dissociation of GTP-G_{αs} from G_{βγ} and G_{αs}-mediated activation of adenylyl cyclase. Adenylyl cyclase IV (AC IV) and IX mRNA are expressed in all kidney nephron segments. AC IV exhibits moderate staining in type II and type IV fibrocytes in rat cochlea and immunoreactivity is also observed in type I fibrocytes. Activation of the D2 dopaminergic and m4 muscarine receptors inhibits the activity of adenylyl cyclase isozymes I, V, VI and VIII, whereas type II, IV and VII are stimulated and type III is not affected.

CHROMOSOMAL LOCATION

Genetic locus: ADCY4 (human) mapping to 14q12; Adcy4 (mouse) mapping to 14 C3.

SOURCE

A cyclase IV (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of A cyclase IV of rat 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-589 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

A cyclase IV (C-20) is recommended for detection of adenylyl cyclase IV 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 IV (C-20) is also recommended for detection of adenylyl cyclase IV in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for A cyclase IV siRNA (h): sc-29602, A cyclase IV siRNA (m): sc-29603, A cyclase IV shRNA Plasmid (h): sc-29602-SH, A cyclase IV shRNA Plasmid (m): sc-29603-SH, A cyclase IV shRNA (h) Lentiviral Particles: sc-29602-V and A cyclase IV shRNA (m) Lentiviral Particles: sc-29603-V.

Molecular Weight of A cyclase IV: 110 kDa.

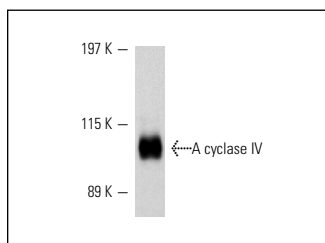
STORAGE

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

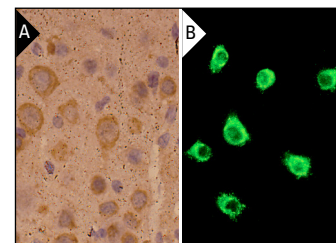
RESEARCH USE

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

DATA



A cyclase IV (C-20): sc-589. Western blot analysis of insect cells transfected with an A cyclase IV baculovirus expression vector.



A cyclase IV (C-20): sc-589. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing membrane localization (A). Immunofluorescence staining of methanol-fixed EOC 20 cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

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