

A cyclase V (A-18): sc-74299

BACKGROUND

Adenylyl cyclases (A cyclases) function to convert ATP to cyclic AMP (cAMP) in response to activation by a variety of hormones, neurotransmitters and other regulatory molecules. cAMP, in turn, activates several other target molecules to control a broad range of diverse phenomena, including metabolism, gene transcription and memory. A cyclases respond to receptor-initiated signals, mediated by a variety of G_s and G_i heterotrimeric G proteins (such as $G_{\alpha s}$). The binding of an agonist to a $G_{\alpha s}$ -coupled receptor catalyzes the exchange of GDP (bound to $G_{\alpha s}$) for GTP, the dissociation of GTP- $G_{\alpha s}$ from $G_{\beta\gamma}$ and the subsequent $G_{\alpha s}$ -mediated activation of A cyclases. A cyclase V, also known as ADCY5, is a 1,261 amino acid Adenylyl cyclase that localizes to cellular membranes and contains two guanylate cyclase domains. Similar to other A cyclase proteins, A cyclase V uses magnesium as a cofactor to catalyze the conversion of ATP to cAMP.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ADCY5 (human) mapping to 3q21.1; Adcy5 (mouse) mapping to 16 B3.

SOURCE

A cyclase V (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of A cyclase V 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.

Blocking peptide available for competition studies, sc-74299 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

A cyclase V (A-18) is recommended for detection of A cyclase V of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

A cyclase V (A-18) is also recommended for detection of A cyclase V in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for A cyclase V siRNA (h): sc-40319, A cyclase V siRNA (m): sc-40320, A cyclase V shRNA Plasmid (h): sc-40319-SH, A cyclase V shRNA Plasmid (m): sc-40320-SH, A cyclase V shRNA (h) Lentiviral Particles: sc-40319-V and A cyclase V shRNA (m) Lentiviral Particles: sc-40320-V.

Molecular Weight of A cyclase V: 132 kDa.

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) 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.

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.

MONOS
Satisfaction
Guaranteed

Try **A cyclase V/VI (B-6): sc-514785**, our highly recommended monoclonal alternative to A cyclase V (A-18).