

A cyclase X (Y-14): sc-161293

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 X, also known as ADCY10 (adenylate cyclase 10), SAC, SACI, HCA2 or sacy, is a 1,610 amino acid soluble adenylyl cyclase that acts as a bicarbonate sensor throughout the body and plays an essential role in spermatogenesis. A member of the A cyclase family, A cyclase X exists as three alternatively spliced isoforms that localize to cytoplasm and cell membrane.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ADCY10 (human) mapping to 1q24.2; Adcy10 (mouse) mapping to 1 H2.3.

SOURCE

A cyclase X (Y-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of A cyclase X 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-161293 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

A cyclase X (Y-14) is recommended for detection of A cyclase X 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); non cross-reactive with other A cyclase family members.

A cyclase X (Y-14) is also recommended for detection of A cyclase X in additional species, including equine and canine.

Suitable for use as control antibody for A cyclase X siRNA (h): sc-88117, A cyclase X siRNA (m): sc-140593, A cyclase X shRNA Plasmid (h): sc-88117-SH, A cyclase X shRNA Plasmid (m): sc-140593-SH, A cyclase X shRNA (h) Lentiviral Particles: sc-88117-V and A cyclase X shRNA (m) Lentiviral Particles: sc-140593-V.

Molecular Weight of A cyclase X: 187 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.

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Satisfaction
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Try **A cyclase X (B-1): sc-515097**, our highly recommended monoclonal alternative to A cyclase X (Y-14).