A cyclase III (C-20): sc-588

**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 Gs and Gi heterotrimeric G proteins. The binding of an agonist to a Gs-coupled receptor catalyzes the exchange of GDP (bound to Gsα) for GTP, the dissociation of GTP-Gsα from Gsβγ and Gsα-mediated activation of adenylyl cyclase. Adenylyl cyclases of the type II family differ from other subforms in that they are conditionally stimulated by Gsα, Gβγ and Gαs-mediated activation of adenyl cyclase. Belonging to the adenylyl cyclase class IV family, A cyclase III is activated by Gαolf, which results in an elevation of cyclic AMP and subsequent activation of a cyclic nucleotide-gated channel.

**CHROMOSOMAL LOCATION**

Genetic locus: ADCY3 (human) mapping to 2p23.3; Adcy3 (mouse) mapping to 12 A1.1.

**SOURCE**

A cyclase III (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of A cyclase III of mouse origin.

**PRODUCT**

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-588 P (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

A cyclase III (C-20) is recommended for detection of adenylyl cyclase III 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 1:3000).

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


Molecular Weight of glycosylated A cyclase III forms: 170/180 kDa.

**STORAGE**

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

**DATA**

![A cyclase III (C-20): sc-588. Western blot analysis of A cyclase III expression in A-10 whole cell lysate.](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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