

# $G_{\alpha i-1}$ : sc-4232 WB

## BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. Each of a very broad range of receptors specifically detects an extracellular stimulus (a photon, pheromone, odorant, hormone or neurotransmitter) while the effectors (i.e. adenylyl cyclase), which act to generate one or more intracellular messengers, are less numerous. In mammals, G protein  $\alpha$ ,  $\beta$  and  $\gamma$  polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their  $\alpha$  subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Four distinct classes of  $G_{\alpha}$  subunits have been identified; these include  $G_s$ ,  $G_i$ ,  $G_q$  and  $G_{\alpha 12/13}$ . The  $G_i$  class comprises all the known  $\alpha$  subunits that are susceptible to pertussis toxin modifications, including  $G_{\alpha i-1}$ ,  $G_{\alpha i-2}$ ,  $G_{\alpha i-3}$ ,  $G_{\alpha o}$ ,  $G_{\alpha t1}$ ,  $G_{\alpha t2}$ ,  $G_{\alpha z}$  and  $G_{\alpha gust}$ . Of these, the three  $G_{\alpha i}$  subtypes function to open atrial potassium channels.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: GNAI1 (human) mapping to 7q21; Gnai1 (mouse) mapping to 5 A3.

## SOURCE

$G_{\alpha i-1}$  is expressed in *E. coli* as a 42 kDa protein mapping at amino acids 1-377 of  $G_{\alpha i-1}$  of rat origin.

## RESEARCH USE

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

## PRODUCT

$G_{\alpha i-1}$  is purified from bacterial lysates (>98%) by column chromatography; supplied as 1.0  $\mu$ g in 0.1 ml SDS-PAGE loading buffer.

## APPLICATIONS

$G_{\alpha i-1}$  is suitable as a Western blotting control for sc-391.

## STORAGE

Store at -20° C. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.