**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. adenyl cyclase), which act to generate one or more intracellular messengers, are less numerous. In mammals, G protein α, β and γ polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their α subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Four distinct classes of Gα subunits have been identified; these include Gαs, Gαi, Gαq and Gα12/13. The Gα class comprises all the known α subunits that are susceptible to pertussis toxin modifications, including Gαi-1, Gαi-2, Gαq-3, Gαs, Gα11, Gα12, Gα13. Of these, the three Gα11 subtypes function to open atrial potassium channels.

**CHROMOSOMAL LOCATION**

Genetic locus: GNAO1 (human) mapping to 16q12.2; Gnao1 (mouse) mapping to 12/13. The α subunits have been identified; these include Gαs, Gαi, Gαq and Gα12/13. The Gα class comprises all the known α subunits that are susceptible to pertussis toxin modifications, including Gαi-1, Gαi-2, Gαq-3, Gαs, Gα11, Gα12, Gα13. Of these, the three Gα11 subtypes function to open atrial potassium channels.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Gαo (A2) is available conjugated to agarose (sc-13532 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13532 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycocerythrin (sc-13532 PE), fluorescein (sc-13532 FITC), Alexa Fluor® 488 (sc-13532 AF488) or Alexa Fluor® 647 (sc-13532 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**APPLICATIONS**

Gαo (A2) is recommended for detection of Gαo 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Gαo (A2) is also recommended for detection of Gαo in additional species, including bovine.

Suitable for use as control antibody for Gαo siRNA (h): sc-29326, Gαo siRNA (m): sc-37256, Gαo shRNA Plasmid (h): sc-29326-SH, Gαo shRNA Plasmid (m): sc-37256-SH, Gαo shRNA (h) Lentiviral Particles: sc-29326-V and Gαo shRNA (m) Lentiviral Particles: sc-37256-V.

Molecular Weight of Gαo: 40 kDa.


**STORAGE**

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

**DATA**

<table>
<thead>
<tr>
<th>Western Blot analysis of Gαo expression in SK-N-SH</th>
<th>Western Blot analysis of Gαo expression in mouse (A) and rat (B) brain extracts.</th>
</tr>
</thead>
</table>

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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