

# G $\alpha$ q/11 (C-19): sc-392



The Power to Question

## 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 (e.g. 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 $\alpha_s$ , G $\alpha_i$ , G $\alpha_q$  and G $\alpha_{12/13}$ . The G $\alpha_q$  class includes G $\alpha_{15}$ , G $\alpha_{14}$ , G $\alpha_{11}$  and G $\alpha_q$ , two of which, G $\alpha_{11}$  and G $\alpha_q$ , are abundant in brain and lung and present at lower levels in a variety of tissues.

## CHROMOSOMAL LOCATION

Genetic locus: GNAQ (human) mapping to 9q21.2, GNA11 (human) mapping to 19p13.3; Gna11 (mouse) mapping to 19 A, Gna11 (mouse) mapping to 10 C1.

## SOURCE

G $\alpha$  q/11 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a domain common to G $\alpha_{11}$  of mouse origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

G $\alpha$  q/11 (C-19) is available conjugated to agarose (sc-392 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-392 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

G $\alpha$  q/11 (C-19) is recommended for detection of G $\alpha_q$  and G $\alpha_{11}$  of mammalian origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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); may cross-react with G $\alpha_{14}$ .

G $\alpha$  q/11 (C-19) is also recommended for detection of G $\alpha_q$  and G $\alpha_{11}$  in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of G $\alpha$  q/11: 40-41 kDa.

Positive Controls: human platelet extract: sc-363773, mouse brain extract: sc-2253 or HeLa whole cell lysate: sc-2200.

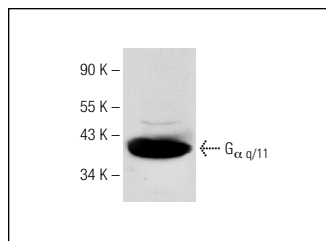
## STORAGE

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

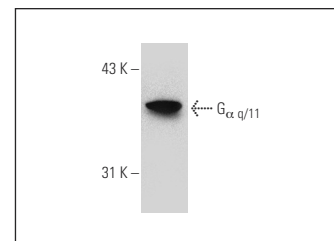
## RESEARCH USE

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

## DATA



G $\alpha$  q/11 (C-19): sc-392. Western blot analysis of G $\alpha$  q/11 expression in mouse brain extract.



G $\alpha$  q/11 (C-19): sc-392. Western blot analysis of G $\alpha$  q/11 expression in human platelet extract.

## SELECT PRODUCT CITATIONS

- Umemori, H., et al. 1997. Activation of the G protein G $\alpha_{q/11}$  through tyrosine phosphorylation of the  $\alpha$  subunit. *Science* 276: 1878-1881.
- Sellers, L.A., et al. 2000. Receptor isoforms mediate opposing proliferative effects through G $\beta\gamma$ -activated p38 or Akt pathways. *Mol. Cell. Biol.* 20: 5974-5985.
- Mellado, M., et al. 2001. Chemokine receptor homo- or heterodimerization activates distinct signaling pathways. *EMBO J.* 20: 2497-2507.
- Hanke, S., et al. 2001. Cross talk between  $\beta$ -adrenergic and bradykinin B $_2$  receptors results in cooperative regulation of cyclic AMP accumulation and mitogen-activated protein kinase activity. *Mol. Cell. Biol.* 21: 8452-8460.
- Minamino, T., et al. 2002. MEKK1 is essential for cardiac hypertrophy and dysfunction induced by G $_q$ . *Proc. Natl. Acad. Sci. USA* 99: 3866-3871.
- Rocha, S., et al. 2005. Regulation of NF $\kappa$ B and p53 through activation of ATR and Chk1 by the ARF tumour suppressor. *EMBO J.* 24: 1157-1169.
- Yasui, F., et al. 2008. Examination of signalling pathways involved in muscarinic responses in bovine ciliary muscle using YM-254890, an inhibitor of the G $_{q/11}$  protein. *Br. J. Pharmacol.* 154: 890-900.
- Guilini, C., et al. 2010. Divergent roles of prokineticin receptors in the endothelial cells: angiogenesis and fenestration. *Am. J. Physiol. Heart Circ. Physiol.* 298: H844-H852.
- Voulalas, P.J., et al. 2011. Differential subcellular distribution of rat brain dopamine receptors and subtype-specific redistribution induced by cocaine. *Mol. Cell. Neurosci.* 46: 645-654.

**MONOS**  
Satisfaction  
Guaranteed

Try G $\alpha$  q/11 (G-7): sc-365906 or G $\alpha$  q (10): sc-136181, our highly recommended monoclonal alternatives to G $\alpha$  q/11 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see G $\alpha$  q/11/14 (G-7): sc-365906.