

$G_{\alpha s/olf}$ (C-18): sc-383

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 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. The G_s subfamily of G_{α} subunits includes two closely related proteins, $G_{\alpha s}$ and $G_{\alpha olf}$, which respectively stimulate adenylyl cyclase and mediate response to olfactory stimuli.

CHROMOSOMAL LOCATION

Genetic locus: GNAS (human) mapping to 20q13.32, GNAL (human) mapping to 18p11.21; Gnas (mouse) mapping to 2 H4, Gnal (mouse) mapping to 18 E1.

SOURCE

$G_{\alpha s/olf}$ (C-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of $G_{\alpha s/olf}$ of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-383 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-383 AC, 500 μ g/0.25 ml agarose in 1 ml.

APPLICATIONS

$G_{\alpha s/olf}$ (C-18) is recommended for detection of $G_{\alpha s}$ and $G_{\alpha olf}$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

$G_{\alpha s/olf}$ (C-18) is also recommended for detection of $G_{\alpha s}$ and $G_{\alpha olf}$ in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of $G_{\alpha s}$ long form: 52 kDa.

Molecular Weight of $G_{\alpha s}$ short form and $G_{\alpha olf}$: 45 kDa.

Molecular Weight of $G_{\alpha olf}$ proteolytic fragment: 39 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, T98G cell lysate: sc-2294 or HeLa whole cell lysate: sc-2200.

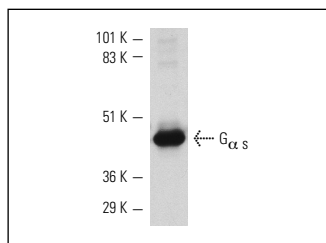
STORAGE

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

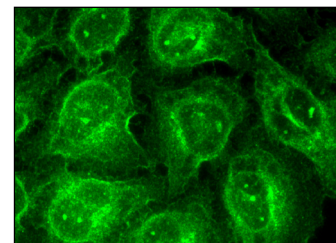
RESEARCH USE

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

DATA



$G_{\alpha s/olf}$ (C-18): sc-383. Western blot analysis of rat recombinant $G_{\alpha s}$.



$G_{\alpha s/olf}$ (C-18): sc-383. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

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3. Minic, J., et al. 2005. Functional expression of olfactory receptors in yeast and development of a bioassay for odorant screening. FEBS J. 272: 524-537.
4. Lapaque, N., et al. 2006. Characterization of *Brucella abortus* lipopolysaccharide macrodomains as mega rafts. Cell. Microbiol. 8: 197-206.
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6. Zhao, N., et al. 2008. Cocaine exposure during the early postnatal period diminishes medial frontal cortex G_s coupling to dopamine D1-like receptors in adult rat. Neurosci. Lett. 438: 159-162.
7. Zhu, M., et al. 2008. Enhanced calcium cycling and contractile function in transgenic hearts expressing constitutively active $G_{\alpha o^*}$ protein. Am. J. Physiol. Heart Circ. Physiol. 294: H1335-H1347.
8. Klimmick, D., et al. 2009. Bestrophin 2: an anion channel associated with neurogenesis in chemosensory systems J. Comp. Neurol. 515: 585-599.
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Try $G_{\alpha s/olf}$ (A-5): sc-55545 or $G_{\alpha s/olf}$ (E-7): sc-55546, our highly recommended monoclonal alternatives to $G_{\alpha s/olf}$ (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see $G_{\alpha s/olf}$ (A-5): sc-55545.