

G_α s/olf (A-5): sc-55545



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 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 α_s and G α_{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 α_s /olf (A-5) is a mouse monoclonal antibody raised against amino acids 82-381 mapping at the C-terminus of G α_{olf} of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

G α_s /olf (A-5) is available conjugated to agarose (sc-55545 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55545 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55545 PE), fluorescein (sc-55545 FITC), Alexa Fluor[®] 488 (sc-55545 AF488), Alexa Fluor[®] 546 (sc-55545 AF546), Alexa Fluor[®] 594 (sc-55545 AF594) or Alexa Fluor[®] 647 (sc-55545 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-55545 AF680) or Alexa Fluor[®] 790 (sc-55545 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

G α_s /olf (A-5) is recommended for detection of G α_{s1-4} and G α_{olf} of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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 1:30-1:3000).

Molecular Weight of G α_s long form: 52 kDa.

Molecular Weight of G α_s short form: 45 kDa.

Molecular Weight of G α_{olf} : 45 kDa.

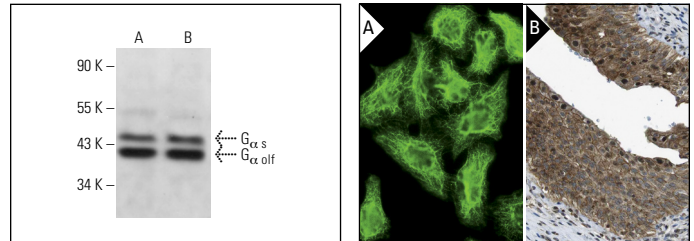
Molecular Weight of G α_s /olf proteolytic fragment: 39 kDa.

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.

DATA



G α_s /olf (A-5): sc-55545. Western blot analysis of G α_s and G α_{olf} expression in SK-N-MC (A) and T98G (B) whole cell lysates.

G α_s /olf (A-5): sc-55545. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear, cytoplasmic and membrane staining of urothelial cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

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- Yazinski, S. and Gomez, G. 2014. Time course of structural and functional maturation of human olfactory epithelial cells *in vitro*. *J. Neurosci. Res.* 92: 64-73.
- Nakamuta, N., et al. 2016. Morphological study on the olfactory systems of the snapping turtle, *Chelydra serpentina*. *Tissue Cell* 48: 145-151.
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RESEARCH USE

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