

G_β 5L (A-16): sc-14947

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 (i.e. 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. Evidence, however, has established an important regulatory role for the $\beta\gamma$ subunits. The G protein β subunits are important regulators of G protein α subunits as well as of certain signal transduction receptors and effectors. In mammals, there are five different members of the β subunit family. Both a long and a short form have been described for G_β 5, which is also known as transducin β 5.

REFERENCES

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- Gautam, N., et al. 1990. G protein diversity is increased by associations with a variety of γ subunits. *Proc. Natl. Acad. Sci. USA* 87: 7973-7977.
- Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.
- von Weizsäcker, E., et al. 1992. Diversity among the β subunits of heterotrimeric GTP-binding proteins: characterization of a novel β subunit cDNA. *Biochem. Biophys. Res. Commun.* 183: 350-356.
- Kleuss, C., et al. 1992. Different β subunits determine G protein interaction with transmembrane receptors. *Nature* 358: 424-426.
- Blank, J.L., et al. 1992. Activation of cytosolic phosphoinositide phospholipase C by G protein $\beta\gamma$ subunits. *J. Biol. Chem.* 267: 23069-23075.
- Hurowitz, E.H., et al. 2000. Genomic characterization of the human heterotrimeric G protein α , β and γ subunit genes. *DNA Res.* 7: 111-120.

CHROMOSOMAL LOCATION

Genetic locus: GNB5 (human) mapping to 15q21.2; Gnb5 (mouse) mapping to 9 D.

SOURCE

G_β 5L (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of G_β 5L of human origin.

PRODUCT

Each vial contains 200 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-14947 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

G_β 5L (A-16) is recommended for detection of G_β 5L 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_β 5L (A-16) is also recommended for detection of G_β 5L in additional species, including equine and canine.

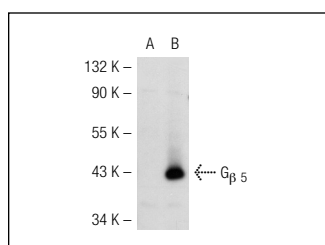
Suitable for use as control antibody for G_β 5 siRNA (h): sc-41770, G_β 5 siRNA (m): sc-41771, G_β 5 shRNA Plasmid (h): sc-41770-SH, G_β 5 shRNA Plasmid (m): sc-41771-SH, G_β 5 shRNA (h) Lentiviral Particles: sc-41770-V and G_β 5 shRNA (m) Lentiviral Particles: sc-41771-V.

Positive Controls: G_β 5 (m): 293T Lysate: sc-120363.

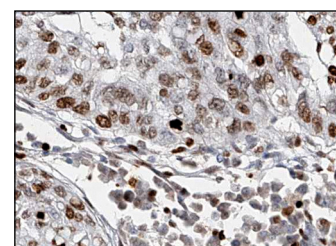
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



G_β 5L (A-16): sc-14947. Western blot analysis of G_β 5 expression in non-transfected: sc-117752 (A) and mouse G_β 5 transfected: sc-120363 (B) 293T whole cell lysates.



G_β 5L (A-16): sc-14947. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung cancer tissue showing nuclear staining of tumor cells at low magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

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.