

G_β 4 (A-13): sc-25023

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. Each subunit of the G protein complex is encoded by a member of one of three corresponding gene families (α , β , γ). In mammals, there are five different members of the β -subunit family. The β subunits of the G proteins are important regulators of G protein α subunits as well as of certain signal transduction receptors and effectors. In contrast to G_β 1-4, which are at least 83% homologous, G_β 5 is only 50% homologous to the other β subunits. Human G_β 5 is expressed at high levels in brain, pancreas, kidney, and heart.

REFERENCES

1. Blatt, C., et al. 1988. Chromosomal localization of genes encoding guanine nucleotide-binding protein subunits in mouse and human. *Proc. Nat. Acad. Sci.* 85: 7642-7646.
2. Modi, W.S., et al. 1989. Chromosomal localization of the gene encoding a third form of the β subunit of GTP-binding regulatory proteins. (Abstract) *Cytogenet. Cell Genet.* 51: 1046.
3. Levine, M.A., et al. 1990. Chromosomal localization of the genes encoding two forms of the G-protein β polypeptide, β -1 and β -3, in man. *Genomics* 8: 380-386.
4. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.

CHROMOSOMAL LOCATION

Genetic locus: GNB4 (human) mapping to 3q26.33; Gnb4 (mouse) mapping to 3 A3.

SOURCE

G_β 4 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of transducin G_β 4 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-25023 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

G_β 4 (A-13) is recommended for detection of G_β 4 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 4 (A-13) is also recommended for detection of G_β 4 in additional species, including equine, canine and porcine.

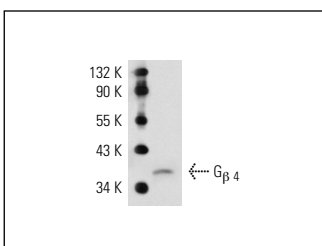
Suitable for use as control antibody for G_β 4 siRNA (h): sc-41768, G_β 4 siRNA (m): sc-41769, G_β 4 shRNA Plasmid (h): sc-41768-SH, G_β 4 shRNA Plasmid (m): sc-41769-SH, G_β 4 shRNA (h) Lentiviral Particles: sc-41768-V and G_β 4 shRNA (m) Lentiviral Particles: sc-41769-V.

Positive Controls: MCP-5 whole cell lysate.

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 4 (A-13): sc-25023. Western blot analysis of G_β 4 expression in MCP-5 whole cell lysate.

RESEARCH USE

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

MONOS
Satisfaction
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Try G_β 4 (F-3): sc-374383, our highly recommended monoclonal alternative to G_β 4 (A-13).