SANTA CRUZ BIOTECHNOLOGY, INC.

$G_{\alpha\ 13}$ (C-13): sc-26788

SANTA CRUZ BIOTECHNOLOGY

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 (i.e. adenyl 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. Four distinct classes of G_{α} subunits have been identified; these include $G_{\alpha\ s}$, $G_{\alpha\ i}$, $G_{\alpha\ q}$ and $G_{\alpha\ 12/13}$. The two members of the fourth class of G_{α} subunit proteins, $G_{\alpha\ 12}$ and $G_{\alpha\ 13}$, are insensitive to ADP-ribosylation by pertussis toxin, share 67% identity with each other and less than 45% identity with other G_{α} subunits and are widely expressed in a broad range of tissues.

CHROMOSOMAL LOCATION

Genetic locus: GNA13 (human) mapping to 17q24.1; Gna13 (mouse) mapping to 11 E1.

SOURCE

$G_{\alpha\ 13}$ (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of $G_{\alpha\ 13}$ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26788 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

$G_{\alpha\ 13}$ (C-13) is recommended for detection of $G_{\alpha\ 13}$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

$G_{\alpha\ 13}$ (C-13) is also recommended for detection of $G_{\alpha\ 13}$ in additional species, including canine.

Suitable for use as control antibody for $G_{\alpha\ 13}$ siRNA (h): sc-35427, $G_{\alpha\ 13}$ siRNA (m): sc-35428, $G_{\alpha\ 13}$ shRNA Plasmid (h): sc-35427-SH, $G_{\alpha\ 13}$ shRNA Plasmid (m): sc-35428-SH, $G_{\alpha\ 13}$ shRNA (h) Lentiviral Particles: sc-35427-V and $G_{\alpha\ 13}$ shRNA (m) Lentiviral Particles: sc-35428-V.

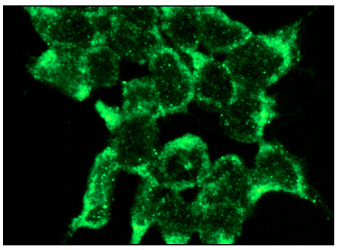
Molecular Weight of $G_{\alpha\ 13}$: 44 kDa.

Positive Controls: Y79 cell lysate: sc-2240, F9 cell lysate: sc-2245 or mouse liver extract: sc-2256.

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) 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



$G_{\alpha\ 13}$ (C-13): sc-26788. Immunofluorescence staining of methanol-fixed F9 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Takefuji, M., et al. 2012. G_{13}-mediated signaling pathway is required for pressure overload-induced cardiac remodeling and heart failure. Circulation 126: 1972-1982.

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.