SANTA CRUZ BIOTECHNOLOGY, INC.

$G_{\beta\ 2}$ (C-16): sc-380

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 (i.e. a photon, pheromone, odorant, hormone or neurotransmitter), while the effectors (e.g. 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. 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.

CHROMOSOMAL LOCATION

Genetic locus: GNB2 (human) mapping to 7q22.1; Gnb2 (mouse) mapping to 5 G2.

SOURCE

$G_{\beta\ 2}$ (C-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a divergent domain in the N-terminus of $G_{\beta\ 2}$ of mouse 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-380 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

$G_{\beta\ 2}$ (C-16) is recommended for detection of $G_{\beta\ 2}$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

$G_{\beta\ 2}$ (C-16) is also recommended for detection of $G_{\beta\ 2}$ in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for $G_{\beta\ 2}$ siRNA (h): sc-41764, $G_{\beta\ 2}$ siRNA (m): sc-41765, $G_{\beta\ 2}$ shRNA Plasmid (h): sc-41764-SH, $G_{\beta\ 2}$ shRNA Plasmid (m): sc-41765-SH, $G_{\beta\ 2}$ shRNA (h) Lentiviral Particles: sc-41764-V and $G_{\beta\ 2}$ shRNA (m) Lentiviral Particles: sc-41765-V.

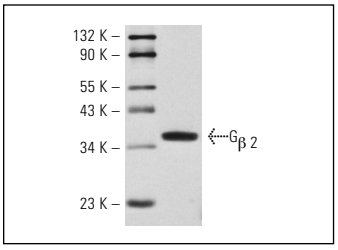
Molecular Weight of $G_{\beta\ 2}$: 36 kDa.

Positive Controls: rat brain extract: sc-2392, mouse brain extract: sc-2253 or human salivary gland extract: sc-363762.

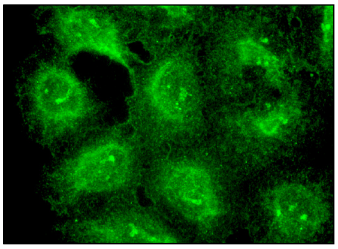
STORAGE

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

DATA



$G_{\beta\ 2}$ (C-16): sc-380. Western blot analysis of $G_{\beta\ 2}$ expression in rat brain extract.



$G_{\beta\ 2}$ (C-16): sc-380. Immunofluorescence staining of methanol-fixed HeLa cells showing perinuclear and membrane localization.

SELECT PRODUCT CITATIONS

1. Schuller, U., et al. 2001. Developmental expression of heterotrimeric G proteins in the murine cerebellar cortex. Histochem. Cell Biol. 116: 149-159.
2. Shin, K.J., et al. 2006. A single lentiviral vector platform for microRNA-based conditional RNA interference and coordinated transgene expression. Proc. Natl. Acad. Sci. USA 103: 13759-13764.
3. Lobanova, E.S., et al. 2008. Transducin γ-subunit sets expression levels of α- and β-subunits and is crucial for rod viability. J. Neurosci. 28: 3510-3520.
4. Yu, M.J., et al. 2008. Large-scale quantitative LC-MS/MS analysis of detergent-resistant membrane proteins from rat renal collecting duct. Am. J. Physiol., Cell Physiol. 295: C661-C678.
5. Lei, B., et al. 2009. Lipid rafts constrain basal a(1A)-adrenergic receptor signaling by maintaining receptor in an inactive conformation. Cell. Signal. 21: 1532-1539.
6. Sanchez, A.M., et al. 2011. Estrogen receptor-α promotes endothelial cell motility through focal adhesion kinase. Mol. Hum. Reprod. 17: 219-226.
7. Sanchez, A.M., et al. 2013. Effects of progesterone and medroxyprogesterone on actin remodeling and neuronal spine formation. Mol. Endocrinol. 27: 693-702.

RESEARCH USE

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