$G_{\beta 2}$ (h): 293T Lysate: sc-117217



The Power to Questio

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. Each subunit of the G protein complex is encoded by a member of one of three corresponding gene families $(\alpha,\,\beta,\,\gamma).$ 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 a subunits as well as of certain signal transduction receptors and effectors. In contrast to $G_{\beta\,1-4}$, which are at least 83% homologous, $G_{\beta\,5}$ is only 50% homologous to the other β subunits. Human $G_{\beta\,5}$ is expressed at high levels in brain, pancreas, kidney, and heart.

REFERENCES

- Blatt, C., Eversole-Cire, P., Cohn, V.H., Zollman, S., Fournier, R.E., Mohandas, L.T., Nesbitt, M., Lugo, T., Jones, D.T., Reed, R.R., et al. 1988. Chromosomal localization of genes encoding guanine nucleotide-binding protein subunits in mouse and human. Proc. Natl. Acad. Sci. USA 85: 7642-7646.
- 2. Gautam, N., Northup, J., Tamir, H. and Simon, M.I. 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., Strathmannm, M.P. and Gautam, N. 1991. Diversity of G proteins in signal transduction. Science 252: 802-808.
- 4. von Weizsacker, E., Strathmann, M.P. and Simon, M.I. 1992. Diversity among the β -subunits of hetero-trimeric GTP-binding proteins: characterization of a novel β -subunit cDNA. Biochem. Biophys. Res. Commun. 183: 350-356.
- Kleuss, C., Scherübl, H., Hescheler, J., Schultz, G. and Wittig, B. 1992.
 Different β-subunits determine G protein interaction with transmembrane receptors. Nature 358: 424-426.
- Blank, J.L., Brattain, K.A., Exton, J.H. 1992. Activation of cytosolic phosphoinositide phospholipase C by G protein βγ subunits. J. Biol. Chem. 267: 23069-23075.
- 7. Hurowitz, E.H., Melnyk, J.M., Chen, Y.J., Kouros-Mehr, H., Simon, M.I. and Shizuya, H. 2000. Genomic characterization of the human heterotrimeric G protein α , β and γ subunit genes. DNA Res. 7: 111-120.

CHROMOSOMAL LOCATION

Genetic locus: GNB2 (human) mapping to 7q22.1.

PRODUCT

 $G_{\beta,2}$ (h): 293T Lysate represents a lysate of human $G_{\beta,2}$ transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

 $G_{\beta~2}$ (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive $G_{\beta~2}$ antibodies. Recommended use: 10-20 μl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

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

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