

SIRP- δ (G-18): sc-85914

BACKGROUND

SIRPs (signal-regulatory proteins) are a family of transmembrane glycoproteins that were identified by their association with the Src homology 2 domain-containing protein-tyrosine phosphatase SHP-2 in response to Insulin. The SIRP family negatively regulates the PI 3-kinase pathway, which may diminish EGFR-mediated motility and survival phenotypes that contribute to transformation of certain cell types. SIRP- δ (signal-regulatory protein delta), also known as PTPNS1L2 (protein tyrosine phosphatase non-receptor type substrate 1-like 2), is a 197 amino acid protein containing a single Ig-like V-type (immunoglobulin-like) domain. SIRP- δ is encoded by a gene located on human chromosome 20, which is comprised of approximately 2% of the human genome. Chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

1. Yamauchi, K., et al. 1995. Identification of the major SHPT2-binding protein that is tyrosine-phosphorylated in response to Insulin. *J. Biol. Chem.* 270: 17716-17722.
2. Fujioka, Y., et al. 1996. A novel membrane glycoprotein, SHPS-1, that binds the SH2-domain-containing tyrosine phosphatase SHP-2 in response to mitogens and cell adhesion. *Mol. Cell. Biol.* 16: 6887-6899.
3. Kharitononkov, A., et al. 1997. A family of proteins that inhibit signalling through tyrosine kinase receptors. *Nature* 386: 181-186.
4. Stofega, M.R., et al. 1998. Growth hormone regulation of SIRP and SHP-2 tyrosyl phosphorylation and association. *J. Biol. Chem.* 273: 7112-7117.
5. Wu, C.J., et al. 2000. Inhibition of EGFR-mediated phosphoinositide-3-OH kinase (PI-3 K) signaling and glioblastoma phenotype by signal-regulatory proteins (SIRPs). *Oncogene* 19: 3999-4010.
6. Latour, S., et al. 2001. Bidirectional negative regulation of human T and dendritic cells by CD47 and its cognate receptor signal-regulator protein- α : downregulation of IL-12 responsiveness and inhibition of dendritic cell activation. *J. Immunol.* 167: 2547-2554.
7. Brooke, G., et al. 2004. Human lymphocytes interact directly with CD47 through a novel member of the signal regulatory protein (SIRP) family. *J. Immunol.* 173: 2562-2570.
8. Kapoor, G.S., et al. 2004. Transcriptional regulation of signal regulatory protein α 1 inhibitory receptors by epidermal growth factor receptor signaling. *Cancer Res.* 64: 6444-6452.
9. Liu, Y., et al. 2005. SIRP- β 1 is expressed as a disulfide-linked homodimer in leukocytes regulates neutrophil transepithelial migration. *J. Biol. Chem.* 280: 36132-36140.

CHROMOSOMAL LOCATION

Genetic locus: SIRPD (human) mapping to 20p13.

RESEARCH USE

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

SOURCE

SIRP- δ (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SIRP- δ 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-85914 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SIRP- δ (G-18) is recommended for detection of SIRP- δ of 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).

Suitable for use as control antibody for SIRP- δ siRNA (h): sc-76500, SIRP- δ shRNA Plasmid (h): sc-76500-SH and SIRP- δ shRNA (h) Lentiviral Particles: sc-76500-V.

Molecular Weight of SIRP- δ : 22 kDa.

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.

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.