

SIRP- β 2 (G-19): sc-85913

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- α 1 is a transmembrane protein which acts as a substrate for activated receptor tyrosine kinases and, in its tyrosine phosphorylated form, binds to SH-PTP2 through SH2 interactions and acts as an SH-PTP2 substrate. SIRP- α 1 has been shown to have negative regulatory effects on cellular responses induced by growth factors, oncogenes and Insulin. SIRP- β 1 shares extensive sequence homology with SIRP- α 1 in its extracellular portion but lacks the cytoplasmic portion. SIRP- β 2 is a 342 amino acid multi-pass membrane protein that contains two Ig-like V-type (immunoglobulin-like) domains and exists as multiple alternatively spliced isoforms.

REFERENCES

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2. Fujioka, Y., Matozaki, T., Noguchi, T., Iwamatsu, A., Yamao, T., Takahashi, N., Tsuda, M., Takada, T. and Kasuga, M. 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. Kharitonov, A., Chen, Z., Sures, I., Wang, H., Schilling, J. and Ullrich, A. 1997. A family of proteins that inhibit signalling through tyrosine kinase receptors. *Nature* 386: 181-186.
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5. Wu, C.J., Chen, Z., Ullrich, A., Greene, M.I. and O'Rourke, D.M. 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.

CHROMOSOMAL LOCATION

Genetic locus: SIRPB2 (human) mapping to 20p13.

SOURCE

SIRP- β 2 (G-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SIRP- β 2 of human origin.

PRODUCT

Each vial contains 100 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-85913 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SIRP- β 2 (G-19) is recommended for detection of SIRP- β 2 isoforms 1, 4 and 5 of 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).

Suitable for use as control antibody for SIRP- β 2 siRNA (h): sc-106551, SIRP- β 2 shRNA Plasmid (h): sc-106551-SH and SIRP- β 2 shRNA (h) Lentiviral Particles: sc-106551-V.

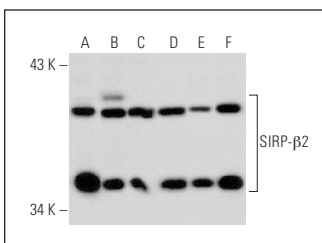
Molecular Weight of SIRP- β 2: 23 kDa.

Positive Controls: U-698-M whole cell lysate: sc-364799, MDA-MB-231 cell lysate: sc-2232 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



SIRP- β 2 (G-19): sc-85913. Western blot analysis of SIRP- β 2 expression in U-698-M (A), ZR-75-1 (B), K-562 (C), HL-60 (D), HEK293 (E) and MDA-MB-231 (F) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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