

SIRP- α (C-20): sc-6922

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 contains an extracellular portion with three immunoglobulin-like structures and a cytoplasmic region with four potential tyrosine phosphorylation sites. SIRP- α (also known as SIRP- α 1, SIRP- α 2 or SIRP- α 3) is a substrate for activated receptor tyrosine kinases. In its tyrosine phosphorylated form, SIRP- α binds to SH-PTP2 through SH2 interactions and acts as an SH-PTP2 substrate. SIRP- α 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 in its extracellular portion but lacks the cytoplasmic portion. SIRP- γ , originally designated SIRP- β 2 (SIRP-B2, CD172g) has unique characteristics from both the α and β versions. SIRP- γ is expressed on the majority of T cells and a proportion of B cells. CD47 associates with SIRP- γ , and this interaction signals unidirectionally only.

REFERENCES

1. Yamauchi, K., et al. 1995. Identification of the major SHPTP2-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. Kharitonov, 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.

CHROMOSOMAL LOCATION

Genetic locus: SIRPA (human) mapping to 20p13; Sirpa (mouse) mapping to 2 F1.

SOURCE

SIRP- α (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SIRP- α 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-6922 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SIRP- α (C-20) is recommended for detection of SIRP- α of mouse, rat and 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), 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).

SIRP- α (C-20) is also recommended for detection of SIRP- α in additional species, including equine, canine, bovine and porcine.

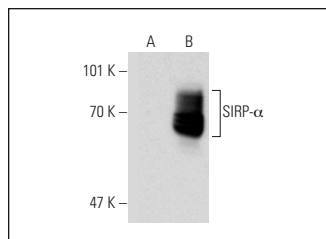
Suitable for use as control antibody for SIRP- α siRNA (h): sc-44106, SIRP- α siRNA (m): sc-36493, SIRP- α shRNA Plasmid (h): sc-44106-SH, SIRP- α shRNA Plasmid (m): sc-36493-SH, SIRP- α shRNA (h) Lentiviral Particles: sc-44106-V, SIRP- α shRNA (m) Lentiviral Particles: sc-36493-V.

Molecular Weight of unglycosylated SIRP- α : 65 kDa.

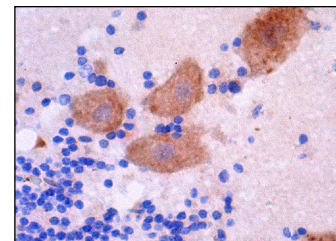
Molecular Weight of glycosylated SIRP- α : 100-150 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, THP-1 cell lysate: sc-2238 or SIRP- α (h): 293T Lysate: sc-159295.

DATA



SIRP- α (C-20): sc-6922. Western blot analysis of SIRP- α expression in non-transfected: sc-117752 (A) and human SIRP- α transfected: sc-159295 (B) 293T whole cell lysates.



SIRP- α (C-20): sc-6922. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells.

SELECT PRODUCT CITATIONS

1. Chen, T.T., et al. 2004. Expression and activation of signal regulatory protein α on astrocytomas. *Cancer Res.* 64: 117-127.
2. Zhang, H., et al. 2005. The Src family kinases Hck and Fgr negatively regulate neutrophil and dendritic cell chemokine signaling via PIR-B. *Immunity* 22: 235-246.

RESEARCH USE

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

MONOS
Satisfaction
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Try **SIRP- α (C-7): sc-376884** or **SIRP- α (27): sc-136067**, our highly recommended monoclonal alternatives to SIRP- α (C-20).