

SIRP- α / β 1 (H-300): sc-11374

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-K pathway, which may diminish EGFR-mediated motility and survival phenotypes that contribute to transformation of certain cell types. SIRP- α 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 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.

CHROMOSOMAL LOCATION

Genetic locus: SIRPA/SIRPB1 (human) mapping to 20p13; Sirpa (mouse) mapping to 2 F1, Sirpb1 (mouse) mapping to 3 A1.

SOURCE

SIRP- α / β 1 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 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.

APPLICATIONS

SIRP- α / β 1 (H-300) is recommended for detection of SIRP- α and SIRP- β 1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SIRP- α / β 1/ γ siRNA (h): sc-36492, SIRP- α / β 1/ γ shRNA Plasmid (h): sc-36492-SH and SIRP- α / β 1/ γ shRNA (h) Lentiviral Particles: sc-36492-V.

Molecular Weight of unglycosylated SIRP- α : 65 kDa.

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

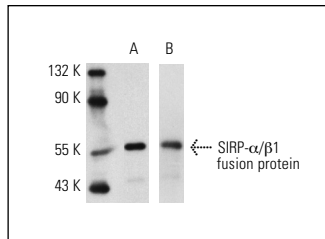
Molecular Weight of SIRP- β : 55 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, AML-193 whole cell lysate: sc-364182 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



Western blot analysis of human recombinant SIRP- α / β 1 fusion protein. Antibodies tested include SIRP- α / β 1 (H-300): sc-11374 (A) and SIRP- α / β 1 (N-19): sc-6921 (B).

SELECT PRODUCT CITATIONS

- Yoshida, H., et al. 2002. Interaction between Src homology 2 domain bearing protein tyrosine phosphatase substrate-1 and CD47 mediates the adhesion of human B lymphocytes to nonactivated endothelial cells. *J. Immunol.* 168: 3213-3220.
- Quintanar-Audelo, M., et al. 2011. Sprouty-related Ena/vasodilator-stimulated phosphoprotein homology 1-domain-containing protein (SPRED1), a tyrosine-protein phosphatase non-receptor type 11 (SHP2) substrate in the Ras/extracellular signal-regulated kinase (ERK) pathway. *J. Biol. Chem.* 286: 23102-23112.

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.



Try **SIRP- α / β (A-1): sc-17803** or **SIRP- α / β (E-7): sc-55491**, our highly recommended monoclonal alternatives to SIRP- α / β 1 (H-300). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SIRP- α / β (A-1): sc-17803**.