SANTA CRUZ BIOTECHNOLOGY, INC.

SIRP-α/β (148): sc-53605

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-α1 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-α1 is a substrate for activated receptor tyrosine kinases. In its tyrosine phosphorylated form, SIRP-α1 binds to SH-PTP2 through SH2 interactions and acts as an SH-PTP2 substrate. SIRP-α1 has been shown to have negative regulatory effects on cellular responses induced by growth factors, oncogenes and insulin. SIRP-β1 shares extensive sequence homology with SIRP-α1 in its extracellular portion but lacks the cytoplasmic portion. SIRP-γ, originally designated SIRP-β2 (SIRP-B2, CD172γ) 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/SIRPB2 (human) mapping to 20p13.

SOURCE

SIRP-α/β (148) is a mouse monoclonal antibody raised against dendritic cells of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SIRP-α/β (148) is available conjugated to either phycoerythrin (sc-53605 PE) or fluorescein (sc-53605 FITC), 200 µg/ml, for IF, IHC(P) and FCM.

RESEARCH USE

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

APPLICATIONS

SIRP-α/β (148) is recommended for detection of SIRP-α and SIRP-β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for SIRP-α/β1/γ siRNA (h): sc-36492, SIRP-α/β1/γ shRNA Plasmid (h): sc-36492-SH and SIRP-α/β1/γ shRNA (h) Lentiviral Particles: sc-36492-V.

Molecular Weight of unglycosylated SIRP-α: 65 kDa.

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

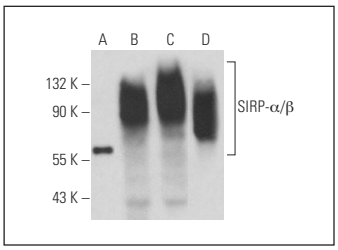
Molecular Weight of SIRP-β: 55 kDa.

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

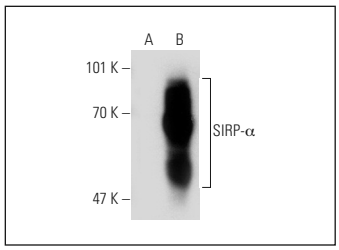
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



SIRP-α/β (148): sc-53605. Western blot analysis of human recombinant SIRP-α/β fusion protein (**A**) and SIRP-α/β expression in HL-60 (**B**), THP-1 (**C**) and human peripheral blood (**D**) whole cell lysates.



SIRP-α/β (148): sc-53605. 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.

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 for detailed protocols and support products.

CONJUGATES

See **SIRP-α/β (A-1): sc-17803** for SIRP-α/β antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.