SANTA CRUZ BIOTECHNOLOGY, INC.

SIRP-α/β1 (E-7): sc-55491

The Power to Question

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-β1 shares extensive sequence homology with SIRP-α in its extracellular portion but lacks the cytoplasmic portion. SIRP-γ, originally designated SIRP-β2 (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.

SOURCE

SIRP-α/β1 (E-7) is a mouse monoclonal antibody raised against amino acids 1-300 of SIRP-α/β1 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.

RESEARCH USE

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

APPLICATIONS

SIRP-α/β1 (E-7) is recommended for detection of SIRP-α and SIRP-β1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

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 SIRP-α: 100-150 kDa.

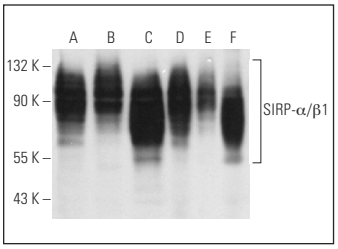
Molecular Weight of SIRP-β: 55 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, AML-193 whole cell lysate: sc-364182 or HL-60 whole cell lysate: sc-2209.

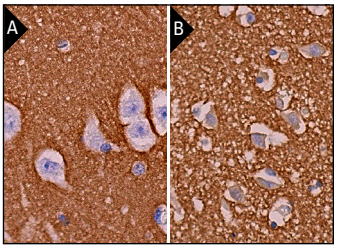
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SIRP-α/β1 (E-7): sc-55491. Western blot analysis of SIRP-α/β1 expression in HL-60 (**A**,**D**), THP-1 (**B**,**E**) and human PBL (**C**,**F**) whole cell lysates under reducing (**A**,**B**,**C**) and non-reducing (**D**,**E**,**F**) conditions.



SIRP-α/β1 (E-7): sc-55491. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex (**A**) and human lateral ventricle (**B**) tissue showing neuropil staining.

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.

See **SIRP-α/β (A-1): sc-17803** for SIRP-α/β antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488, Alexa Fluor® 594, Alexa Fluor® 647, Alexa Fluor® 680 and Alexa Fluor® 790.