SANTA CRUZ BIOTECHNOLOGY, INC.

SH2-B α/β/γ (E-20): sc-10827

BACKGROUND

SH2-β is a component of the signaling network involved in the regulation of cell shape and movement. SH2-β is related to the APS (adapter molecule containing PH and SH2 domains) family of adapter proteins, which characteristically contain a pleckstrin homology (PH) domain, an SH2 domain and a tyrosine phosphorylation site. SH2-β is alternatively spliced to generate three distinct isoforms, SH2-B α, β, and γ, that share an identical N-terminal sequence, including the PH domain, the SH2 domain, and multiple proline-rich motifs. The isoform SH2-βb contributes to the regulation of the actin cytoskeleton as it associates with various tyrosine kinases in response to growth factor stimulation. Following PDGF stimulation, SH2-βb can directly interact with the PDGF receptor (PDGFR) where it is phosphorylated on tyrosine residues and functions as a signaling protein for the PDGFR pathway. In addition, SH2-βb is also a substrate for JAK2 and, thereby, mediates the cytoskeletal reorganization that is induced by the signaling pathways of various growth factors.

CHROMOSOMAL LOCATION

Genetic locus: SH2B1 (human) mapping to 16p11.2; Sh2b1 (mouse) mapping to 7 F3.

SOURCE

SH2-B α/β/γ (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SH2-B β of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10827 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SH2-B α/β/γ (E-20) is recommended for detection of SH2-B isoforms α, β and γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

SH2-B α/β/γ (E-20) is also recommended for detection of SH2-B α, β and γ in additional species, including equine, canine, bovine and porcine.

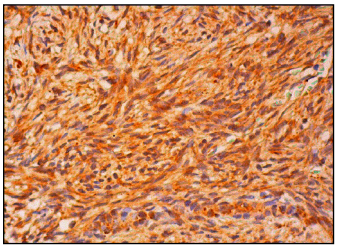
Suitable for use as control antibody for SH2-B siRNA (h): sc-44095, SH2-B siRNA (m): sc-40333, SH2-B shRNA Plasmid (h): sc-44095-SH, SH2-B shRNA Plasmid (m): sc-40333-SH, SH2-B shRNA (h) Lentiviral Particles: sc-44095-V and SH2-B shRNA (m) Lentiviral Particles: sc-40333-V.

Molecular Weight of SH2-B α/β/γ isoforms: 70-95 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



SH2-B α/β/γ (E-20): sc-10827. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic and nuclear staining of ovarian stroma cells.

SELECT PRODUCT CITATIONS

1. Miquet, J.G., et al. 2005. Desensitization of the JAK2/Stat5 GH signaling pathway associated with increased CIS protein content in liver of pregnant mice. Am. J. Physiol. Endocrinol. Metab. 289: E600-E607.
2. Miquet, J.G., et al. 2005. Increased SH2-B β content and membrane association in transgenic mice overexpressing GH. J. Endocrinol. 185: 301-306.
3. Miquet, J.G., et al. 2005. Increased sensitivity to GH in liver of Ames dwarf ($Prop1^{df}/Prop1^{df}$) mice related to diminished CIS abundance. J. Endocrinol. 187: 387-397.

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 or our catalog for detailed protocols and support products.