SANTA CRUZ BIOTECHNOLOGY, INC.

HSH2 (C-14): sc-240561

BACKGROUND

HSH2 (hematopoietic SH2 protein), also known as ALX or HSH2D, is a 352 amino acid nuclear and cytoplasmic protein that is predominantly expressed in spleen and hematopoietic cells such as peripheral blood leukocytes and weakly expressed in prostate, thymus, heart, small intestine and placenta. Containing a SH2 domain, four PXXP polyproline sequences and two possible sites of tyrosine phosphorylation sites, HSH2 interacts with tyrosine kinases Fes and ACK. Considered an adaptor protein, HSH2 participates in tyrosine kinase signaling and may be involved in the regulation of cytokine signaling and cytoskeletal reorganization, in hematopoietic cells. HSH2 may also act to attenuate apoptosis through modulating the apoptotic response by promoting mitochondrial stability. HSH2 exists as two alternatively spliced isoforms and is encoded by a gene located on human chromosome 19p13.11.

REFERENCES

1. Oda, T., et al. 2001. HSH2: a novel SH2 domain-containing adapter protein involved in tyrosine kinase signaling in hematopoietic cells. Biochem. Biophys. Res. Commun. 288: 1078-1086.
2. Greene, T.A., et al. 2003. Cloning and characterization of ALX, an adaptor downstream of CD28. J. Biol. Chem. 278: 45128-45134.
3. Shapiro, M.J., et al. 2004. The ALX Src homology 2 domain is both necessary and sufficient to inhibit T cell receptor/CD28-mediated upregulation of RE/AP. J. Biol. Chem. 279: 40647-40652.
4. Shapiro, M.J., et al. 2005. The carboxyl-terminal segment of the adaptor protein ALX directs its nuclear export during T cell activation. J. Biol. Chem. 280: 38242-38246.
5. Herrin, B.R., et al. 2005. The adaptor protein HSH2 attenuates apoptosis in response to ligation of the B cell antigen receptor complex on the B lymphoma cell line, WEHI-231. J. Biol. Chem. 280: 3507-3515.
6. Herrin, B.R. and Justement, L.B. 2006. Expression of the adaptor protein hematopoietic Src homology 2 is upregulated in response to stimuli that promote survival and differentiation of B cells. J. Immunol. 176: 4163-4172.

CHROMOSOMAL LOCATION

Genetic locus: HSH2D (human) mapping to 19p13.11.

SOURCE

HSH2 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HSH2 of human 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-240561 P, (100 µg 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

HSH2 (C-14) is recommended for detection of HSH2 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HSH2 siRNA (h): sc-97691, HSH2 shRNA Plasmid (h): sc-97691-SH and HSH2 shRNA (h) Lentiviral Particles: sc-97691-V.

Molecular Weight of HSH2: 47 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.