SANTA CRUZ BIOTECHNOLOGY, INC.

STAM2 (D-16): sc-82750

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cytokine stimulation of the IL-2 receptor leads to the tyrosine phosphorylation of a number of cellular proteins and to the induction of various transcription factors including c-Fos and c-Myc. The signal transducing adapter molecule, STAM, is speculated to play a role in c-Myc induction by various cytokines. STAM contains an SH3 (Src homology 3) motif as well as an immunoreceptor tyrosine-based activation (ITAM) motif, both of which appear to be required for c-Myc induction in response to IL-2 and GM-CSF. STAM associates with JAK3 and JAK2 via its ITAM region, and it is tyrosine phosphorylated by JAK3 and JAK2 after stimulation with IL-2 and GM-CSF, respectively. STAM2, also known as Hbp, is a protein that is highly related to STAM. Similar to STAM, STAM2 functions downstream of JAK kinases and can be phosphorylated in response to cytokines. Due to alternative splicing events, two isoforms of STAM2 exist, namely STAM2A and STAM2B.

REFERENCES

1. Miyazaki, T., et al. 1994. Functional activation of JAK1 and JAK3 by selective association with IL-2 receptor subunits. Science 266: 1045-1047.
2. Taniguchi, T. 1995. Cytokine signaling through nonreceptor protein tyrosine kinases. Science 268: 251-255.
3. Ihle, J.N., et al. 1995. Signaling through the hematopoietic cytokine receptors. Annu. Rev. Immunol. 13: 369-398.
4. Minami, Y., et al. 1995. Protein tyrosine kinase Syk is associated with and activated by the IL-2 receptors: possible link with the c-Myc induction pathway. Immunity 2: 89-100.
5. Kawahara, A., et al. 1995. Critical role for the interleukin 2 (IL-2) receptor γ-chain-associated Jak3 in the IL-2 induced c-Fos and c-Myc, but not Bcl-2, gene induction. Proc. Natl. Acad. Sci. USA 92: 8724-8728.
6. Takeshita, T., et al. 1996. Cloning of a novel signal-transducing adaptor molecule containing an SH3 domain and ITAM. Biochem. Biophys. Res. Commun. 225: 1035-1039.

CHROMOSOMAL LOCATION

Genetic locus: STAM2 (human) mapping to 2q23.3; Stam2 (mouse) mapping to 2 C1.1.

SOURCE

STAM2 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of STAM2 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-82750 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

STAM2 (D-16) is recommended for detection of STAM2 of mouse, rat and 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)], 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); non cross-reactive with family member STAM.

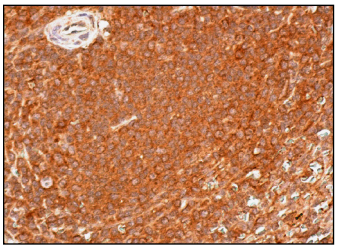
STAM2 (D-16) is also recommended for detection of STAM2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for STAM2 siRNA (h): sc-76584, STAM2 siRNA (m): sc-76585, STAM2 shRNA Plasmid (h): sc-76584-SH, STAM2 shRNA Plasmid (m): sc-76585-SH, STAM2 shRNA (h) Lentiviral Particles: sc-76584-V and STAM2 shRNA (m) Lentiviral Particles: sc-76585-V.

Molecular Weight of STAM2: 58 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, SK-N-MC cell lysate: sc-2237 or HeLa whole cell lysate: sc-2200.

DATA



STAM2 (D-16): sc-82750. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

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.