SANTA CRUZ BIOTECHNOLOGY, INC.

STAM (N-17): sc-6920

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.

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.
7. Takeshita, T., et al. 1997. STAM, signal transducing adaptor molecule, is associated with Janus kinases and involved in signaling for cell growth and c-Myc induction. Immunity 6: 449-457.

CHROMOSOMAL LOCATION

Genetic locus: STAM (human) mapping to 10p12.33; Stam (mouse) mapping to 2 A1.

SOURCE

STAM (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of STAM 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-6920 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

STAM (N-17) is recommended for detection of STAM 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).

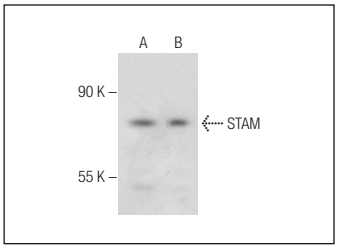
STAM (N-17) is also recommended for detection of STAM in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for STAM siRNA (h): sc-41043, STAM siRNA (m): sc-41044, STAM shRNA Plasmid (h): sc-41043-SH, STAM shRNA Plasmid (m): sc-41044-SH, STAM shRNA (h) Lentiviral Particles: sc-41043-V and STAM shRNA (m) Lentiviral Particles: sc-41044-V.

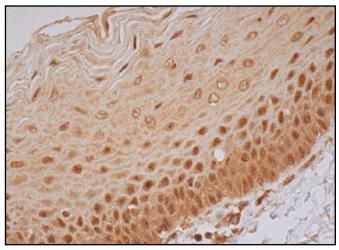
Molecular Weight of STAM: 70 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

DATA



STAM (N-17): sc-6920. Western blot analysis of STAM expression in K-562 (**A**) and Jurkat (**B**) whole cell lysates.



STAM (N-17): sc-6920. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic and nuclear staining of squamous epithelial cells.

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.

MONOS Satisfaction Guaranteed

Try **STAM (B-2): sc-133093** or **STAM (D-3): sc-133092**, our highly recommended monoclonal alternatives to STAM (N-17).