SANTA CRUZ BIOTECHNOLOGY, INC.

STAM (D-3): sc-133092

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 (D-3) is a mouse monoclonal antibody raised against amino acids 366-540 mapping at the C-terminus of STAM of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

STAM (D-3) is recommended for detection of STAM of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

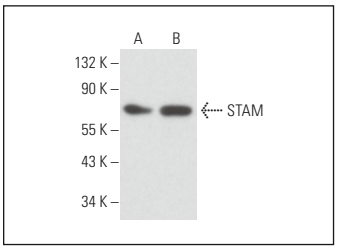
Molecular Weight of STAM: 70 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, Hep G2 cell lysate: sc-2227 or NCI-H226 whole cell lysate: sc-364256.

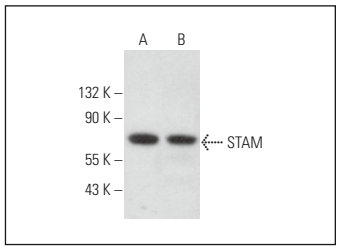
RECOMMENDED SUPPORT REAGENTS

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.

DATA



STAM (D-3): sc-133092. Western blot analysis of STAM expression in MCF7 (**A**) and Hep G2 (**B**) whole cell lysates.



STAM (D-3): sc-133092. Western blot analysis of STAM expression in MCF7 (**A**) and NCI-H226 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Iavello, A., et al. 2016. Role of Alix in miRNA packaging during extracellular vesicle biogenesis. Int. J. Mol. Med. 37: 958-966.

RESEARCH USE

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

PROTOCOLS

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