

CAML (m): 293T Lysate: sc-118985

BACKGROUND

The NFAT (nuclear factor of activated T cells) family of transcription factors regulates cytokine expression in T cells through *cis*-acting elements located in the promoters of the cytokine genes. The NFAT family consists of the cytoplasmic NFAT (NFATc), transcription factors NFATc1, NFATc2, NFATc3 and NFATc4, and nuclear NFAT (NFATn). Each of these transcription factors plays a role in T cell activation. CAML (calcium-signal modulating cyclophilin ligand) has been identified as an activator of NFAT and NF-IL2A when overexpressed in Jurkat cells. CAML has also been shown to activate calcineurin by causing calcium influx. TACI (transmembrane activator and CAML-interactor), a member of the TNF receptor superfamily, was identified based on its capacity to bind to CAML and has been shown to induce activation of NFAT in the presence of CAML.

REFERENCES

1. Ho, S., Timmerman, L., Northrop, J. and Crabtree, G.R. 1994. Cloning and characterization of NFATc and NFATp: the cytoplasmic components of NFAT. *Adv. Exp. Med. Biol.* 365: 167-173.
2. Bram, R.J. and Crabtree, G.R. 1994. Calcium signalling in T cells stimulated by a cyclophilin B-binding protein. *Nature* 371: 355-358.
3. Ho, S.N., Thomas, D.J., Timmerman, L.A., Li, X., Francke, U. and Crabtree, G.R. 1995. NFATc3, a lymphoid-specific NFATc family member that is calcium-regulated and exhibits distinct DNA binding specificity. *J. Biol. Chem.* 270: 19898-19907.
4. Rao, A. 1995. NFATp, a cyclosporin-sensitive transcription factor implicated in cytokine gene induction. *J. Leukoc. Biol.* 57: 536-542.
5. Hoey, T., Sun, Y.L., Williamson, K. and Xu, X. 1995. Isolation of two new members of the NFAT gene family and functional characterization of the NFAT proteins. *Immunity* 2: 461-472.
6. Masuda, E.S., Naito, Y., Tokumitsu, H., Campbell, D., Saito, F., Hannum, C., Arai, K. and Arai, N. 1995. NFATx, a novel member of the nuclear factor of activated T cells family that is expressed predominantly in the thymus. *Mol. Cell. Biol.* 15: 2697-2706.
7. Timmerman, L.A., Clipstone, N.A., Ho, S.N., Northrop, J.P. and Crabtree, G.R. 1996. Rapid shuttling of NFAT in discrimination of Ca²⁺ signals and immunosuppression. *Nature* 383: 837-840.
8. von Bulow, G.U. and Bram, R.J. 1997. NFAT activation induced by a CAML-interacting member of the tumor necrosis factor receptor superfamily. *Science* 278: 138-141.

CHROMOSOMAL LOCATION

Genetic locus: *Caml* (mouse) mapping to 13 B1.

PRODUCT

CAML (m): 293T Lysate represents a lysate of mouse CAML transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

CAML (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive CAML antibodies. Recommended use: 10-20 µl per lane.

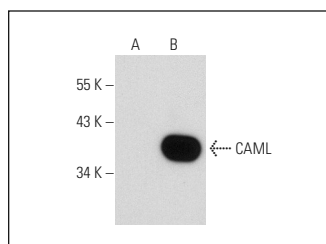
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CAML (B-12): sc-166557 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse CAML expression in CAML transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

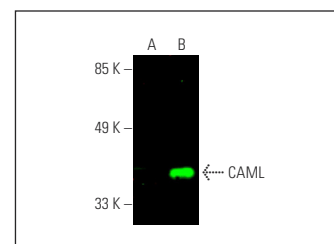
RECOMMENDED SUPPORT REAGENTS

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.

DATA



CAML (B-12): sc-166557. Western blot analysis of CAML expression in non-transfected: sc-117752 (A) and mouse CAML transfected: sc-118985 (B) 293T whole cell lysates.



CAML (B-12): sc-166557. Near-infrared western blot analysis of CAML expression in non-transfected: sc-117752 (A) and mouse CAML transfected: sc-118985 (B) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

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.