

CAML (B-12): sc-166557

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 over-expressed 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., et al. 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., et al. 1995. NFATc3, a lymphoid-specific NFATc family member that is calcium-regulated and exhibits distinct DNA binding specificity. *J. Biol. Chem.* 270: 19898-19907.

CHROMOSOMAL LOCATION

Genetic locus: CAMLG (human) mapping to 5q31.1; Caml (mouse) mapping to 13 B1.

SOURCE

CAML (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 15-40 near the N-terminus of CAML of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CAML (B-12) is available conjugated to agarose (sc-166557 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166557 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166557 PE), fluorescein (sc-166557 FITC), Alexa Fluor® 488 (sc-166557 AF488), Alexa Fluor® 546 (sc-166557 AF546), Alexa Fluor® 594 (sc-166557 AF594) or Alexa Fluor® 647 (sc-166557 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166557 AF680) or Alexa Fluor® 790 (sc-166557 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166557 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

CAML (B-12) is recommended for detection of CAML 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).

CAML (B-12) is also recommended for detection of CAML in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CAML siRNA (h): sc-43659, CAML siRNA (m): sc-44438, CAML shRNA Plasmid (h): sc-43659-SH, CAML shRNA Plasmid (m): sc-44438-SH, CAML shRNA (h) Lentiviral Particles: sc-43659-V and CAML shRNA (m) Lentiviral Particles: sc-44438-V.

Molecular Weight (predicted) of CAML: 33 kDa.

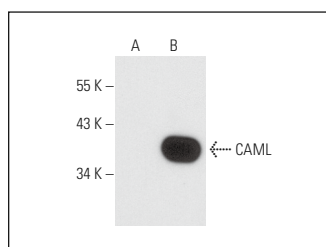
Molecular Weight (observed) of CAML: 37-42 kDa.

Positive Controls: mouse testis extract: sc-2405 or CAML (m): 293T Lysate: sc-118985.

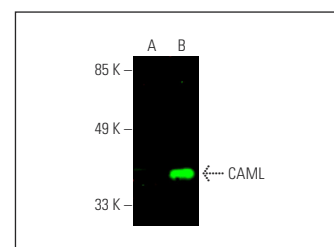
RECOMMENDED SUPPORT REAGENTS

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



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.

STORAGE

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