BACKGROUND

TOX (thymocyte selection-associated high mobility group (HMG) box protein) is a 526 amino acid nuclear protein that is a member of the HMG box family of DNA-binding proteins and likely plays a role in the regulation of T-cell development. Expression of TOX is upregulated by pre-T cell receptor (pre-TCR) and TCR activation in immature thymocytes, but not by TCR activation in mature thymocytes. CD4 T cells fail to develop in TOX-deficient mice, however functional CD8+ T cells still develop, suggesting that TOX-dependent transition to the CD4+CD8 stage is required for development of class II major histocompatibility complex-specific T cells. Calcineurin activation events and CD8 lineage commitment seem to be linked due to evidence that up-regulation of TOX in double positive thymocytes is calcineurin dependent.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: TOX (human) mapping to 8q12.1; Tox (mouse) mapping to 4 A1.

SOURCE

TOX (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 31-63 near the N-terminus of TOX of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-374137 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

TOX (H-2) is recommended for detection of TOX 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).

TOX (H-2) is also recommended for detection of TOX in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for TOX siRNA (h): sc-77552, TOX siRNA (m): sc-154562, TOX shRNA Plasmid (h): sc-77552-SH, TOX shRNA Plasmid (m): sc-154562-SH, TOX shRNA (h) Lentiviral Particles: sc-77552-V and TOX shRNA (m) Lentiviral Particles: sc-154562-V.

Molecular Weight (predicted) of TOX: 58 kDa.

Molecular Weight (observed) of TOX: 58-70 kDa.

Positive Controls: TOX (m): 293T Lysate: sc-126147 or Jurkat nuclear extract: sc-2132.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:


DATA

TOX (H-2): sc-374137. Western blot analysis of TOX expression in non-transfected: sc-117752 (A) and mouse TOX transfected: sc-126147 (B) 293T whole cell lysates and Jurkat nuclear extract (C).

PROTOCOLS

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