



## TSA-1 (N-15): sc-23083

### BACKGROUND

The human thymic shared antigen-1 (Ly-6E, RIGE, RIG-E, SCA-2, TSA-1) gene maps to chromosome 8q24 and encodes a 131 amino acid protein that belongs to the Ly-6 family of glycosylphosphatidylinositol (GPI)-linked proteins. Ly-6 family members have an approximate molecular mass of 15 kDa and share amino acid homology throughout a distinctive cysteine rich protein domain that incorporates O-linked carbohydrates. Liver, kidney, ovary, immature thymocytes, stromal cells and peripheral blood leukocytes contain high levels of TSA-1, while much lower levels are present in bone marrow stem cells. Lymphocytes expressing Ly-6 family proteins are responsive to IFNs, particularly IFN- $\alpha$ . The Ly-6 family influences normal seeding and colonization of the thymus by bone marrow stem cells, and the maturation of these cells into mature T lymphocytes.

### REFERENCES

1. Classon, B.J., et al. 1994. Mouse stem cell antigen Sca-2 is a member of the Ly-6 family of cell surface proteins. *Proc. Natl. Acad. Sci. USA* 91: 5296-5300.
2. Brakenhoff, R.H., et al. 1997. A gain of novel tissue specificity in the human Ly-6 gene E48. *J. Immunol.* 159: 4879-4886.
3. Shan, X., et al. 1998. Characterization and mapping to human chromosome 8q24.3 of Ly-6-related gene 9804 encoding an apparent homologue of mouse TSA-1. *J. Immunol.* 160: 197-208.
4. Classon, B.J., et al. 1998. Thymic-shared antigen-1 (TSA-1). A lymphostromal cell membrane Ly-6 superfamily molecule with a putative role in cellular adhesion. *Dev. Immunol.* 6: 149-156.
5. Ding, L., et al. 2001. Inhibition of the function of the Fc $\gamma$ RIIB by a monoclonal antibody to thymic shared antigen-1, a Ly-6 family antigen. *Immunology* 104: 28-36.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601384. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. LocusLink Report (LocusID: 4061). <http://www.ncbi.nlm.nih.gov/LocusLink/>

### CHROMOSOMAL LOCATION

Genetic locus: Ly6e (mouse) mapping to 15 D3.

### SOURCE

TSA-1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TSA-1 of mouse origin.

### STORAGE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-23083 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

TSA-1 (N-15) is recommended for detection of TSA-1 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 TSA-1 siRNA (m): sc-154709, TSA-1 shRNA Plasmid (m): sc-154709-SH and TSA-1 shRNA (m) Lentiviral Particles: sc-154709-V.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### RESEARCH USE

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