



## VSTM3 (A-13): sc-103319

### BACKGROUND

VSTM3 (V-set and transmembrane domain-containing protein 3), also known as TIGIT (T cell immunoreceptor with Ig and ITIM domains) or VSIG9, is a 244 amino acid single-pass type I membrane protein that contains one Ig-like V-type domain and exists as multiple alternatively spliced isoforms. Expressed at low levels in NK cells and in peripheral memory and regulatory CD4<sup>+</sup> T cells, VSTM3 binds with high affinity to CD155 and, via this binding, causes an increase in the secretion of IL-10 and suppresses T cell activation by promoting the creation of mature dendritic cells. The gene encoding VSTM3 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci.

### REFERENCES

1. Mellman, I. and Steinman, R.M. 2001. Dendritic cells: specialized and regulated antigen processing machines. *Cell* 106: 255-258.
2. Cant, C.A. and Ullrich, A. 2001. Signal regulation by family conspiracy. *Cell. Mol. Life Sci.* 58: 117-124.
3. Latour, S., et al. 2001. Bidirectional negative regulation of human T and dendritic cells by CD47 and its cognate receptor signal-regulator protein- $\alpha$ : down-regulation of IL-12 responsiveness and inhibition of dendritic cell activation. *J. Immunol.* 167: 2547-2554.
4. Braun, D., et al. 2006. Semimature stage: a checkpoint in a dendritic cell maturation program that allows for functional reversion after signal-regulatory protein- $\alpha$  ligation and maturation signals. *J. Immunol.* 177: 8550-8559.
5. Yu, X., et al. 2009. The surface protein TIGIT suppresses T cell activation by promoting the generation of mature immunoregulatory dendritic cells. *Nat. Immunol.* 10: 48-57.

### CHROMOSOMAL LOCATION

Genetic locus: TIGIT (human) mapping to 3q13.31.

### SOURCE

VSTM3 (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of VSTM3 of human origin.

### 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-103319 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### 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

VSTM3 (A-13) is recommended for detection of VSTM3 of human 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); non cross-reactive with other VSTM family members.

Suitable for use as control antibody for VSTM3 siRNA (h): sc-78458, VSTM3 shRNA Plasmid (h): sc-78458-SH and VSTM3 shRNA (h) Lentiviral Particles: sc-78458-V.

Molecular Weight of VSTM3: 26 kDa.

### 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.

### PROTOCOLS

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