SANTA CRUZ BIOTECHNOLOGY, INC.

TEM8 (C-14): sc-19761

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The tripartite toxin secreted by *Bacillus anthraci* is the causative agent of anthrax evading the immune system and killing the host during a systemic infection. Two components of the toxin, odemema factor (OF) and lethal factor (LF) enzymatically modify substrates within the cytosol of mammalian cells. The third component, protective antigen (PA), binds to a cellular receptor, which mediates the delivery of the enzymatic components to the cytosol. TEM8 (tumor endothelial marker 8) is one of the tumor specific endothelial markers (TEMs) whose N-terminus encodes this receptor designated ATR (anthrax toxin receptor). TEM8 is highly expressed in tumor endothelial cells but not in normal endothelial cells. TEMs have elevated expression during tumor angiogenesis. Four TEM genes, TEM1, TEM5, TEM7 and TEM8, encode the TEM proteins, which contain putative transmembrane domains. ATR is a type I membrane protein with an extracellular von Willebrand factor A domain that binds directly to PA. The first 364 amino acids of ATR protein are identical to those of TEM8. However, the C-terminal ends of the ATR and TEM8 proteins are different, presumably due to alternative splicing. A soluble version of von Willebrand factor A domain seems to protect cells from the toxin action.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ANTXR1 (human) mapping to 2p13.3; Antxr1 (mouse) mapping to 6 D1.

SOURCE

TEM8 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TEM8 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-19761 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

TEM8 (C-14) is recommended for detection of TEM8 of mouse, rat and 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).

TEM8 (C-14) is also recommended for detection of TEM8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TEM8 siRNA (h): sc-44144, TEM8 siRNA (m): sc-40201, TEM8 shRNA Plasmid (h): sc-44144-SH, TEM8 shRNA Plasmid (m): sc-40201-SH, TEM8 shRNA (h) Lentiviral Particles: sc-44144-V and TEM8 shRNA (m) Lentiviral Particles: sc-40201-V.

Molecular Weight of TEM8 ATR: 46 kDa.

Molecular Weight of full-length TEM8: 63 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.