SANTA CRUZ BIOTECHNOLOGY, INC.

EAT-2 (N-14): sc-21572

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The pathogenesis of the Ewing sarcoma family of tumors is characterized by the presence of an EWS/FLI1 fusion gene following a translocation between chromosomes 11 and 22, which results in the expression of a chimeric protein. Originally isolated from Ewing's sarcoma tumor cells lines, the EWS/FLI1 activated transcript 2 (EAT-2) protein is an intracellular signaling protein that is expressed in immune cells, including macrophages and B lymphocytes. EAT-2 is expressed in NIH/3T3 cells within 4-8 hours of EWS/FLI1 induction, suggesting a potential role for EAT-2 in the oncogenesis of Ewing's sarcoma. EAT-2 binds members of the signaling lymphocytic-activation molecule (SLAM) family of immune receptors, which are present in varying levels in immune cells. Specifically, EAT-2 plays a role in controlling the signal transduction of antigen-presenting cells by binding to SLAM family members CD150, CD244, CD84 and CD229, which contain conserved tyrosine motifs in their cytoplasmic tails.

REFERENCES

1. Thompson, A.D., et al. 1996. EAT-2 is a novel SH2 domain containing protein that is up regulated by Ewing's sarcoma EWS/FLI1 fusion gene. Oncogene 13: 2649-2658.
2. West, D.C. 2000. Ewing sarcoma family of tumors. Curr. Opin. Oncol. 12: 323-329.
3. Morra, M., et al. 2001. Structural basis for the interaction of the free SH2 domain EAT-2 with SLAM receptors in hematopoietic cells. EMBO J. 20: 5840-5852.
4. Veillette, A. 2002. The SAP family: a new class of adaptor-like molecules that regulates immune cell functions. Sci. STKE 120: 8.

CHROMOSOMAL LOCATION

Genetic locus: SH2D1B (human) mapping to 1q23.3; Sh2d1b (mouse) mapping to 1 H3.

SOURCE

EAT-2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of EAT-2 of human origin.

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-21572 P, (100 µg 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

EAT-2 (N-14) is recommended for detection of EAT-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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 EAT-2 siRNA (h): sc-42970, EAT-2 siRNA (m): sc-42971, EAT-2 shRNA Plasmid (h): sc-42970-SH, EAT-2 shRNA Plasmid (m): sc-42971-SH, EAT-2 shRNA (h) Lentiviral Particles: sc-42970-V and EAT-2 shRNA (m) Lentiviral Particles: sc-42971-V.

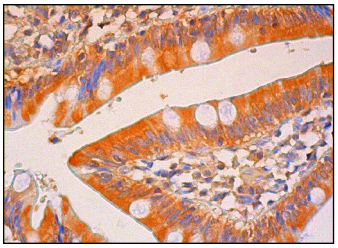
Molecular Weight of EAT-2: 21 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



EAT-2 (N-14): sc-21572. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Sumegi, J., et al. 2011. A novel t(4;22)(q31;q12) produces an EWSR1-SMARCA5 fusion in extraskeletal Ewing sarcoma/primitive neuroectodermal tumor. Mod. Pathol. 24: 333-342.
2. Binsky-Ehrenreich, I., et al. 2014. CD84 is a survival receptor for CLL cells. Oncogene 33: 1006-1016.