SANTA CRUZ BIOTECHNOLOGY, INC.

dcTRAILR1/2 (K-15): sc-46906

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

TRAILR1 and TRAILR2, receptors for the tumor necrosis factor-related apoptosis-inducing ligand (TRAIL), are members of the tumor necrosis factor (TNF) family of cytokines, and induce apoptosis in a broad range of cells. The two function as dosage-dependent tumor suppressors, and both TRAILR1 and TRAILR2 activate a caspase-dependent apoptotic pathway but, unlike TRAILR1, TRAILR2 mediates apoptosis via the intracellular adaptor molecule FADD/MORT1. Since TRAIL triggers apoptosis in tumor cells without toxicity to normal cells, these proteins are implicated in the treatment of cancer, especially for patients whose disease is in relapse. Decoy TRAIL receptor 1 and 2 (or dcTRAILR1 and dcTRAILR2) are receptors for the cytotoxic ligand TRAIL. dcTRAILR1 and 2 lack a cytoplasmic death domain and so is not capable of inducing apoptosis or the NFκB pathway. These two receptors may protect cells against TRAIL mediated apoptosis through ligand competition.

REFERENCES

1. Walczak, H., et al. 1997. TRAILR2: a novel apoptosis-mediating receptor for TRAIL. EMBO J. 16: 5386-5397.
2. Neznanov, N., et al. 2002. Unstable receptors disappear from cell surface during poliovirus infection. Med. Sci. Monit. 8: BR391-396.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603598. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Petit, F., et al. 2002. Productive HIV-1 infection of primary CD4+ T cells induces mitochondrial membrane permeabilization leading to a caspase-independent cell death. J. Biol. Chem. 277: 1477-1487.
5. Harper, N., et al. 2003. Fas-associated death domain protein and caspase-8 are not recruited to the tumor necrosis factor receptor 1 signaling complex during tumor necrosis factor-induced apoptosis. J. Biol. Chem. 278: 25534-25541.
6. MacFarlane, M., et al. 2005. TRAIL receptor-selective mutants signal to apoptosis via TRAILR1 in primary lymphoid malignancies. Cancer Res. 65: 11265-11270.
7. Rubio-Moscardo, F., et al. 2005. Characterization of 8p21.3 chromosomal deletions in B-cell lymphoma: TRAILR1 and TRAILR2 as candidate dosage-dependent tumor suppressor genes. Blood 106: 3214-3222.
8. Menoret, E., et al. 2006. Mcl-1L cleavage is involved in TRAILR1- and TRAILR2-mediated apoptosis induced by HGS-ETR1 and HGS-ETR2 human mAbs in myeloma cells. Blood 108: 1346-1352.
9. Younes, M., et al. 2006. Functional expression of TRAIL receptors TRAIL-R1 and TRAILR2 in esophageal adenocarcinoma. Eur. J. Cancer 42: 542-547.

CHROMOSOMAL LOCATION

Genetic locus: Tnfrsf23/Tnfrsf22 (mouse) mapping to 7 F5.

STORAGE

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

SOURCE

dcTRAILR1/2 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of dcTRAILR1 of mouse 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-46906 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

dcTRAILR1/2 (K-15) is recommended for detection of Decoy TRAIL receptors 1 and 2 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).

Molecular Weight of dcTRAILR1: 20 kDa.

Molecular Weight of dcTRAILR2: 22 kDa.

Positive Controls: mouse spleen extract: sc-2391, rat spleen extract: sc-2397 or BW5147 cell lysate: sc-3800.

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.