SANTA CRUZ BIOTECHNOLOGY, INC.

granzyme M (L-14): sc-51099

BACKGROUND

The granzyme family of proteins belong to the larger peptidase S1 family. Granzyme A and granzyme B are serine proteases that facilitate apoptotic signaling in cytotoxic T lymphocytes (CTL) and natural killer (NK) cells. Within the granules of activated CTLs, granzyme A and granzyme B are processed and converted to their active forms by the lysosomal cysteine protease cathepsin C. Once cleaved, these active proteases target distinct substrates for proteolysis and, thereby, mediate apoptosis through two different pathways. Granzyme H localizes to cytoplasmic granules of cytolytic T-lymphocytes and is important for target cell lysis in cell-mediated immune responses. Granzyme K is a serine protease localizing to the granules of natural killer cells and cytotoxic T lymphocytes. Granzyme M, also designated natural killer cell granular protease (HU-Met-1) or met-1 serine protease, contains one peptidase S1 domain. Granzyme M is a trypsin-fold serine protease that localizes to granules of large granular lymphocytes (natural killer cells) and cleaves peptide substrates after leucine, norleucine or methionine. This enzyme may play a role in target cell death induction by cytotoxic lymphocytes.

REFERENCES

1. Mahrus, S., Kisiel, W. and Craik, C.S. 2004. Granzyme M is a regulatory protease that inactivates proteinase inhibitor 9, an endogenous inhibitor of granzyme B. J. Biol. Chem. 279: 54275-54282.
2. Bade, B., Boettcher, H.E., Lohrmann, J., Hink-Schauer, C., Bratke, K., Jenne, D.E., Virchow, J.C. and Luttmann, W. 2005. Differential expression of the granzymes A, K and M and perforin in human blood lymphocytes. Int. Immunol. 17: 1419-1428.

CHROMOSOMAL LOCATION

Genetic locus: GZMM (human) mapping to 19p13.3.

SOURCE

granzyme M (L-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of granzyme M 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-51099 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.

PROTOCOLS

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

APPLICATIONS

Granzyme M (L-14) is recommended for detection of granzyme M of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for granzyme M siRNA (h): sc-60761, granzyme M shRNA Plasmid (h): sc-60761-SH and granzyme M shRNA (h) Lentiviral Particles: sc-60761-V.

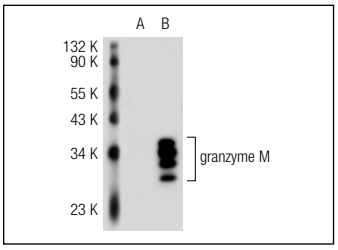
Molecular Weight of granzyme M: 33 kDa.

Positive Controls: Granzyme M (h): 293T Lysate: sc-114142 or WI-38 whole cell lysate: sc-364260

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.

DATA



granzyme M (L-14): sc-51099. Western blot analysis of granzyme M expression in non-transfected: sc-117752 (**A**) and human granzyme M transfected: sc-114142 (**B**) 293T whole cell lysates.

RESEARCH USE

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