

granulysin (N-20): sc-16968

BACKGROUND

Granulysin (NKG5) is a saposin-like protein (SAPLIP) that is expressed in granular cells and functions as an effector molecule for antimicrobial responses in the hematopoietic system. Upon antigen stimulation generated from intracellular pathogens such as bacteria, fungi and parasites, granulysin mediates the release of cytotoxic granules from cytolytic T lymphocytes (CTLs) and natural killer cells (NKs), a process that can lead to apoptosis. The potent antimicrobial activity of granulysin may occur through elevated pathogen host-cell permeability and lysis. Human granulysin is expressed as proteins of two sizes derived from three unique transcripts. Granulysin expressing CTLs, in the presence of perforin, can kill extracellular and intracellular *Mycobacterium tuberculosis* through a granule-dependent mechanism, suggesting that granulysin may play a broad role in T cell-mediated host protection against certain pathogens.

REFERENCES

1. Stenger, S., et al. 1999. Granulysin: a lethal weapon of cytolytic T cells. *Immunol. Today* 20: 390-394.
2. Pena, S.V. and Krensky, A.M. 1997. Granulysin, a new human cytolytic granule-associated protein with possible involvement in cell-mediated cytotoxicity. *Semin. Immunol.* 9: 117-125.
3. Houchins, J.P., et al. 1993. Genomic structure of NKG5, a human NK and T cell-specific activation gene. *Immunogenetics* 37: 102-107.
4. Gamen, S., et al. 1998. Granulysin-induced apoptosis. I. Involvement of at least two distinct pathways. *J. Immunol.* 161: 1758-1764.
5. Hanson, D.A., et al. 1999. Biosynthesis of granulysin, a novel cytolytic molecule. *Mol. Immunol.* 36: 413-422.
6. Stenger, S., et al. 1998. An antimicrobial activity of cytolytic T cells mediated by granulysin. *Science* 282: 121-125.

CHROMOSOMAL LOCATION

Genetic locus: GNLY (human) mapping to 2p11.2.

SOURCE

granulysin (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of granulysin 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-16968 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

granulysin (N-20) is recommended for detection of granulysin 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).

Suitable for use as control antibody for granulysin siRNA (h): sc-42887, granulysin shRNA Plasmid (h): sc-42887-SH and granulysin shRNA (h) Lentiviral Particles: sc-42887-V.

Molecular Weight of granulysin: 15/9 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.

SELECT PRODUCT CITATIONS

1. Hewagama, A., et al. 2009. Stronger inflammatory/cytotoxic T cell response in women identified by microarray analysis. *Genes Immun.* 10: 509-516.
2. Teng, L., et al. 2012. Proteomic identification of calumenin as a G551D-CFTR associated protein. *PLoS ONE* 7: e40173.

RESEARCH USE

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



Try **granulysin (F-9): sc-271119**, our highly recommended monoclonal alternative to granulysin (N-20).