

granulysin (F-9): sc-271119

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.

CHROMOSOMAL LOCATION

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

SOURCE

granulysin (F-9) is a mouse monoclonal antibody raised against amino acids 16-145 representing full length mature granulysin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

granulysin (F-9) is available conjugated to agarose (sc-271119 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271119 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271119 PE), fluorescein (sc-271119 FITC), Alexa Fluor[®] 488 (sc-271119 AF488), Alexa Fluor[®] 546 (sc-271119 AF546), Alexa Fluor[®] 594 (sc-271119 AF594) or Alexa Fluor[®] 647 (sc-271119 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271119 AF680) or Alexa Fluor[®] 790 (sc-271119 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

granulysin (F-9) is recommended for detection of precursor and mature forms of granulysin of human origin by Western Blotting (starting dilution 1:100, 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 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 precursor: 15 kDa.

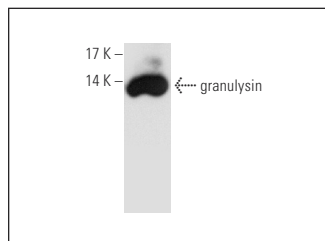
Molecular Weight of granulysin post-translational modifications: 9 kDa.

Positive Controls: NK-92 whole cell lysate: sc-364788.

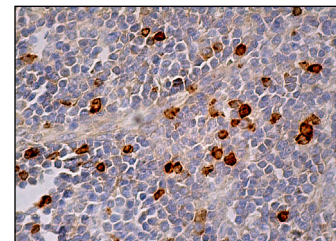
STORAGE

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

DATA



granulysin (F-9): sc-271119. Western blot analysis of granulysin expression in NK-92 whole cell lysate.



granulysin (F-9): sc-271119. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of subset of cells in non-germinal center.

SELECT PRODUCT CITATIONS

- Roncati, L., et al. 2016. Prognostic factors for breast cancer: an immunomorphological update. *Pathol. Oncol. Res.* 22: 449-452.
- Lo Bello, G., et al. 2018. Granulysin, a novel marker for extranodal NK/T cell lymphoma, nasal type. *Virchows Arch.* 473: 749-757.
- Pantaleo, M.A., et al. 2019. Immune microenvironment profiling of gastrointestinal stromal tumors (GIST) shows gene expression patterns associated to immune checkpoint inhibitors response. *Oncoimmunology* 8: e1617588.
- Losic, B., et al. 2020. Intratumoral heterogeneity and clonal evolution in liver cancer. *Nat. Commun.* 11: 291.
- Hao, L., et al. 2020. Enhanced tuberculosis clearance through the combination treatment with recombinant adenovirus-mediated granulysin delivery. *Theranostics* 10: 10046-10056.
- Imai, T., et al. 2020. Involvement of activated cytotoxic T lymphocytes and natural killer cells in Henoch-Schönlein purpura nephritis. *Clin. Transl. Immunology* 9: e1212.
- Cochran, A.M., et al. 2021. Extracellular vesicles from the human natural killer cell line NK3.3 have broad and potent anti-tumor activity. *Front. Cell Dev. Biol.* 9: 698639.

RESEARCH USE

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

PROTOCOLS

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