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GZMB Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6575A

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P10144
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19352
Calculated MW	27716
Antigen Region	2-32

Additional Information

Gene ID	3002
Other Names	Granzyme B, C11, CTLA-1, Cathepsin G-like 1, CTSGL1, Cytotoxic T-lymphocyte proteinase 2, Lymphocyte protease, Fragmentin-2, Granzyme-2, Human lymphocyte protein, HLP, SECT, T-cell serine protease 1-3E, GZMB, CGL1, CSPB, CTLA1, GRB
Target/Specificity	This GZMB antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 2-32 amino acids from the N-terminal region of human GZMB.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GZMB Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GZMB {ECO:0000303|PubMed:32188940, ECO:0000312|HGNC:HGNC:4709}
Function	Abundant protease in the cytosolic granules of cytotoxic T- cells and

NK-cells which activates caspase-independent pyroptosis when delivered into the target cell through the immunological synapse (PubMed:1985927, PubMed:3262682, PubMed:3263427). It cleaves after Asp (PubMed:1985927, PubMed:8258716). Once delivered into the target cell, acts by catalyzing cleavage of gasdermin-E (GSDME), releasing the pore- forming moiety of GSDME, thereby triggering pyroptosis and target cell death (PubMed:31953257, PubMed:32188940). Seems to be linked to an activation cascade of caspases (aspartate-specific cysteine proteases) responsible for apoptosis execution. Cleaves caspase-3, -9 and -10 (CASP3, CASP9 and CASP10, respectively) to give rise to active enzymes mediating apoptosis (PubMed:9852092). Cleaves and activates CASP7 in response to bacterial infection, promoting plasma membrane repair (By similarity).

Cellular Location

Secreted. Cytolytic granule. Note=Delivered into the target cell by perforin (PubMed:20038786).

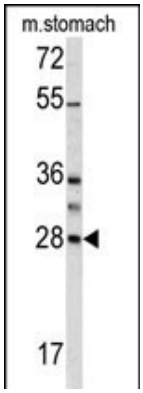
Background

Cytolytic T lymphocytes (CTL) and natural killer (NK) cells share the remarkable ability to recognize, bind, and lyse specific target cells. They are thought to protect their host by lysing cells bearing on their surface 'nonself' antigens, usually peptides or proteins resulting from infection by intracellular pathogens. The protein is crucial for the rapid induction of target cell apoptosis by CTL in cell-mediated immune response.

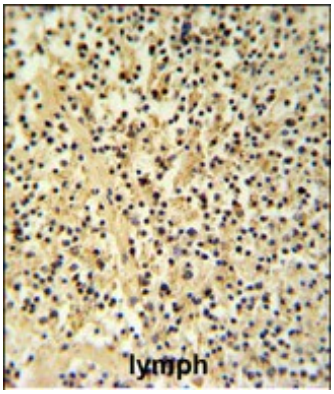
References

Hagn,M., J. Immunol. 183 (3), 1838-1845 (2009)
Gaafar,A., Exp. Hematol. 37 (7), 838-848 (2009)
Girnita,D.M., Transplantation 87 (12), 1801-1806 (2009)

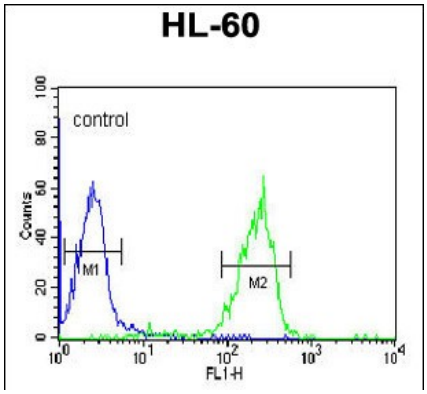
Images



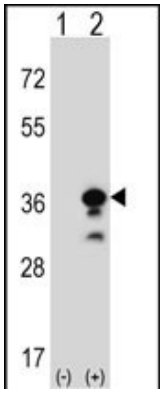
Western blot analysis of GZMB antibody (N-term) (Cat. #AP6575a) in mouse stomach lysates (35ug/lane). GZMB (arrow) was detected using the purified Pab.



GZMB Antibody (N-term) (Cat. #AP6575a) IHC analysis in formalin fixed and paraffin embedded human Lymph tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GZMB Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



GZMB Antibody (N-term) (Cat. #AP6575a) flow cytometric analysis of HL-60 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Western blot analysis of GZMB (arrow) using rabbit polyclonal GZMB Antibody (N-term) (Cat. #AP6575a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the GZMB gene.