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Recombinant Anti-Neutrophil Elastase Rabbit mAb

Catalog # AP95013

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	P08246
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal
Calculated MW	28518

Additional Information

Gene ID	1991
Other Names	ELA2; Neutrophil elastase; Bone marrow serine protease; Elastase-2; Human leukocyte elastase; HLE; Medullasin; PMN elastase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within human Neutrophil Elastase protein. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~1:10~50 IF/IC~~N/A
Format	Liquid in PBS, pH 7.3, 50% glycerol, 0.05% BSA, and 0.05% Proclin300.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	ELANE
Synonyms	ELA2
Function	Serine protease that modifies the functions of natural killer cells, monocytes and granulocytes (PubMed:15140022). Shows microbicidal activity in neutrophils by mediating cleavage and degradation of bacterial proteins (PubMed:10947984, PubMed:25161283). Capable of killing E.coli but not S.aureus in vitro; digests outer membrane protein A (ompA) in E.coli and K.pneumoniae (PubMed:10947984). Involved for the formation of neutrophil extracellular traps (NETs): translocates into the nucleus downstream of MPO and mediates degadation of histone H4, thereby participating to chromatin decondensation (PubMed:20974816, PubMed:25066128, PubMed:28574339). NETs are mainly composed of DNA fibers and are released by neutrophils to trap pathogens during inflammation (PubMed:20974816, PubMed:25066128, PubMed:28574339). Inhibits C5a-dependent neutrophil enzyme release and chemotaxis (PubMed:15140022). Promotes cleavage of GSDMB, thereby inhibiting pyroptosis (PubMed:36899106). Promotes blood coagulation

(PubMed:20676107). Through the activation of the platelet fibrinogen receptor integrin alpha-IIb/beta-3, potentiates platelet aggregation induced by a threshold concentration of cathepsin G (CTSG) (PubMed:25211214, PubMed:9111081). Cleaves and thus inactivates tissue factor pathway inhibitor (TFPI) (PubMed:20676107, PubMed:25211214).

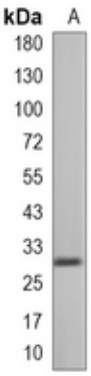
Cellular Location

Cytoplasmic vesicle, phagosome. Lysosome Cytolytic granule. Nucleus. Note=Localizes to azurophil granules, a type of primary lysosome found in neutrophils and monocytes that contains antimicrobial proteins (PubMed:20974816, PubMed:25066128) Translocates from azurophil granules to the nucleus downstream of MPO during formation of neutrophil extracellular traps (NETs), and is present in released NETs (PubMed:20974816, PubMed:25066128, PubMed:32434865). Localized in phagolysosomes following ingestion of E.coli by neutrophils (PubMed:10947984).

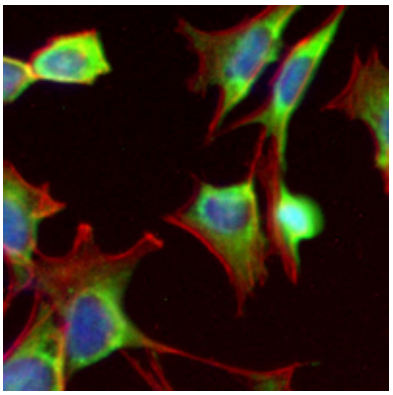
Tissue Location

Bone marrow cells. Neutrophil (PubMed:10947984).

Images



Western blot analysis of Neutrophil Elastase expression in HL60 (A) whole cell lysates. (Predicted band size: 29 kD; Observed band size: 29 kD)



Immunofluorescent analysis of Neutrophil Elastase staining in HL60 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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