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Anti-Neutrophil Elastase Antibody

Catalog # AP95813

Product Information

Application	WB, IHC, FC
Primary Accession	P08246
Reactivity	Human, Mk
Host	Mouse
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	Recombinant fusion protein of human Neutrophil Elastase expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200)
Format	Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
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).

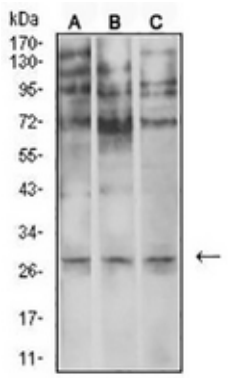
Cellular Location

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).

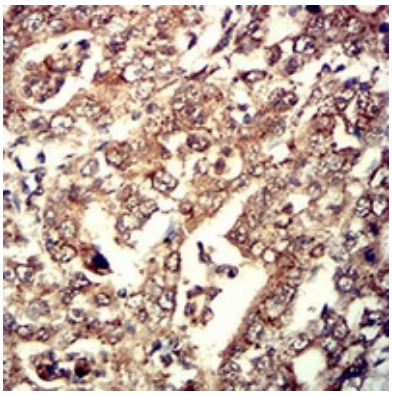
Tissue Location

Bone marrow cells. Neutrophil (PubMed:10947984).

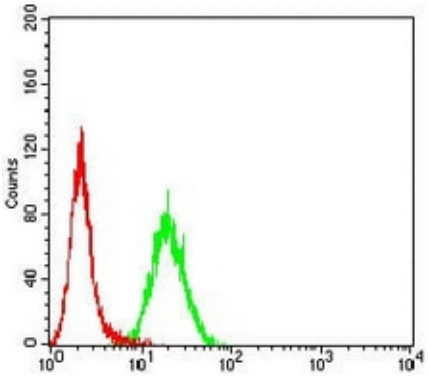
Images



Western blot analysis of Neutrophil Elastase expression in U937 (A), SPCA1 (B), COS7 (C) whole cell lysates. (Predicted band size: 29 kD; Observed band size: 29 kD)



Immunohistochemical analysis of Neutrophil Elastase staining in human stomach cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Flow cytometric analysis of HeLa cells using Anti-Neutrophil Elastase Antibody (green) and negative control (red).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.