

Neutrophil Elastase (NE) Active Protein | NE active protein

Active Neutrophil Elastase (NE)

CATALOG # AAA161712	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Neutrophil Elastase (NE); Active Neutrophil Elastase (NE); Neutrophil Elastase; ELANE; HLE; HNE; ELA2; PMN-E; Medullasin; Polymorphonuclear Leukocyte Elastase; Bone Marrow Serine Protease; Leukocyte Elastase; PMN Elastase4; NE active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ile30~Gln2 47
Applicable Applications for NE active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	Two N-terminal Tags, His-tag and SUMO-tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	8.7
Research Area	Enzyme & Kinase, Infection immunity
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

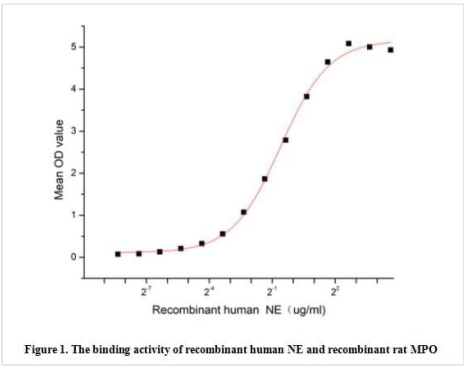


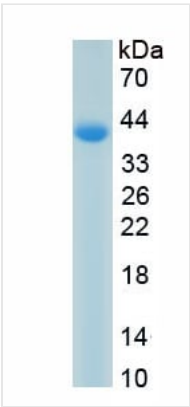
Figure 1. The binding activity of recombinant human NE and recombinant rat MPO

Bioactivity

Neutrophil elastase (NE), also known as polymorphonuclear leukocyte elastase, is a major protease in the primary granules of neutrophils, is involved in microbicidal activity. It is located primarily in the azurophilic granules of polymorphonuclear leukocytes. NE is an important factor promoting inflammation, has bactericidal effects, and shortens the inflammatory process. NE also regulates tumor growth by promoting metastasis and tumor microenvironment remodeling. However, NE plays a role in killing tumors under certain conditions and promotes other diseases such as pulmonary ventilation dysfunction. Additionally, it plays a complex role in various physiological processes and mediates several diseases. Myeloperoxidase (MPO) has been identified as an interactor of NE, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human NE and recombinant rat MPO. Briefly, biotin-linked NE were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to MPO-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 ul stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant human NE and recombinant rat MPO was shown in Figure 1, the EC50 for this effect is 0.66 ug/mL.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for NE active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	4503549
NCBI GeneID	1991
NCBI Accession #	NP_001963.1
NCBI GenBank Nucleotide #	NM_001972.2
UniProt Accession #	P08246; P09649; Q6B0D9; Q6LDP5
Molecular Weight	28,518 Da
NCBI Official Full Name	neutrophil elastase preproprotein
NCBI Official Synonym Full Names	elastase, neutrophil expressed
NCBI Official Symbol	ELANE
NCBI Official Synonym Symbols	GE; NE; HLE; HNE; ELA2; SCN1; PMN-E
NCBI Protein Information	neutrophil elastase; elastase-2; medullasin; PMN elastase; leukocyte elastase; elastase 2, neutrophil; human leukocyte elastase; polymorphonuclear elastase; bone marrow serine protease; granulocyte-derived elastase
UniProt Protein Name	Neutrophil elastase
UniProt Gene Name	ELANE

UniProt Synonym Gene Names	ELA2; HLE
UniProt Entry Name	ELNE_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/neutrophil-elastase-ne/161712>