Mouse neutrophil elastase,NE ELISA Kit

Product Code	CSB-E04804m
Abbreviation	ELA2
Target Name	elastase 2, neutrophil
Uniprot No.	Q3UP87
Alias	ELA2, GE, HLE, HNE, NE, PMN-E, SCN1, bone marrow serine protease|elastase 2, neutrophil|granulocyte-derived elastase|leukocyte elastase|medullasin|neutrophil elastase|polymorphonuclear elastase
Product Type	ELISA Kit
Immunogen Species	Mus musculus (Mouse)
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	0.312 ng/mL-20 ng/mL
Sensitivity	0.078 ng/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Signal Transduction
Gene Names	Elane
Tag Info	quantitative
Protein Description	Sandwich

Description

The mouse neutrophil elastase (NE) ELISA Kit is engineered for accurate measurement of mouse NE levels from samples including serum, plasma, cell culture supernates, or tissue homogenates. It uses the Sandwich-ELISA mechanism in combination with the enzyme-substrate chromogenic reaction to measure the NE content in the sample. The color intensity is positively correlated with NE content in the sample. This kit has been validated against standards of sensitivity, specificity, precision, linearity, recovery, and lot-to-lot consistency.

NE is a serine protease that plays a causal role in inflammation and is involved in various physiological processes such as the formation of neutrophil extracellular trap and degradation of extracellular matrix and proteins. It is mainly found in neutrophil azurophilic granules. NE can be rapidly released from neutrophils in response to inflammatory stimuli and is therefore regarded as a sign of inflammation and is closely associated with some inflammatory diseases such as bronchiectasis and chronic obstructive pulmonary disease. It also

actively participates in cardiovascular disease. NE enhances myocardial damage by triggering excessive inflammation. And many studies have found that high expression of NE in atherosclerotic plaques.

Target Details

Elastases form a subfamily of serine proteases that hydrolyze many proteins in addition to elastin. Humans have six elastase genes which encode the structurally similar proteins. The product of this gene hydrolyzes proteins within specialized neutrophil lysosomes, called azurophil granules, as well as proteins of the extracellular matrix following the protein s release from activated neutrophils. The enzyme may play a role in degenerative and inflammatory diseases by its proteolysis of collagen-IV and elastin of the extracellular matrix. This protein degrades the outer membrane protein A (OmpA) of E. coli as well as the virulence factors of such bacteria as Shigella, Salmonella and Yersinia. Mutations in this gene are associated with cyclic neutropenia and severe congenital neutropenia (SCN). This gene is clustered with other serine protease gene family members, azurocidin 1 and proteinase 3 genes, at chromosome 19pter. All 3 genes are expressed coordinately and their protein products are packaged together into azurophil granules during neutrophil differentiation.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of mouse NE in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:10	Average %	88
	Range %	82-95
1:20	Average %	97
	Range %	93-101
1:40	Average %	99
	Range %	95-106
1:80	Average %	93
	Range %	87-99

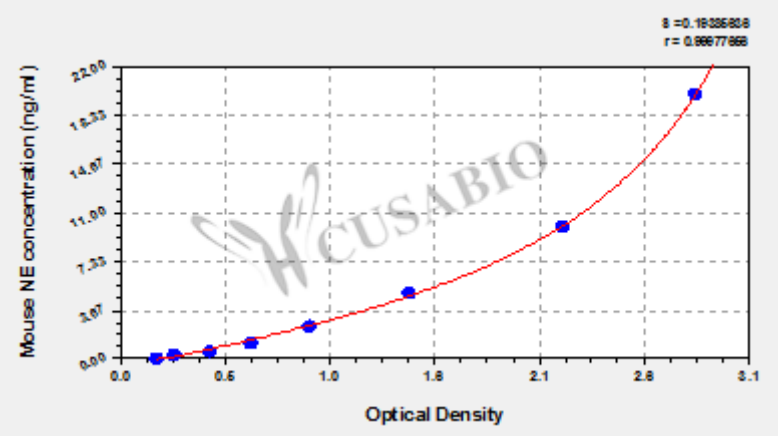
Recovery

The recovery of mouse NE spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	91	87-95
EDTA plasma (n=4)	99	95-104

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



ng/ml	OD1	OD2	Average	Corrected
20	2.849	2.793	2.821	2.627
10	2.132	2.222	2.177	1.983
5	1.465	1.388	1.427	1.233
2.5	0.948	0.929	0.939	0.745
1.25	0.643	0.666	0.655	0.461
0.625	0.472	0.442	0.457	0.263
0.312	0.278	0.288	0.283	0.089
0	0.198	0.189	0.194	?

Msds

{"0":{"fileurl":"https://www.cusabio.com/uploadfile/msds/MSDS CSB-E04804m.pdf","filename":"MSDS"}}