

Store at
-20°C

#63610

Neutrophil Elastase Antibody



Support: +1-978-867-2388 (U.S.)
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Entrez-Gene ID #1991
UniProt ID #P08246

New 02/18

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications
W, IP
Endogenous

Species Cross-Reactivity*
H

Molecular Wt.
30 kDa

Source
Rabbit**

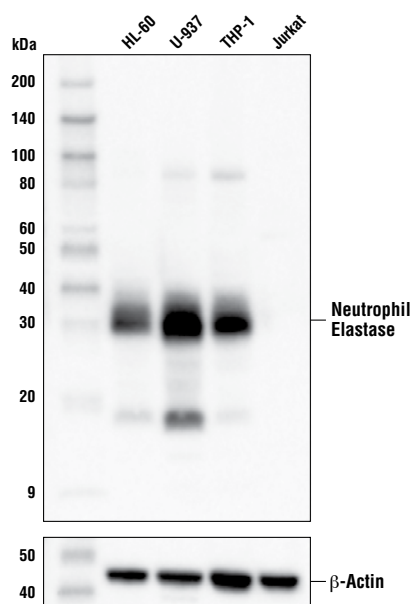
Background: Neutrophil elastase is hematopoietic serine protease that belongs to the chymotrypsin superfamily and plays a critical role in the innate immune function of mature neutrophils and monocytes (1,2). Neutrophil elastase is actively synthesized as an inactive zymogen in myelocytic precursor cells of the bone marrow, which then undergoes activation by limited proteolysis and sorting to primary (azurophil) storage granules of mature neutrophil granulocytes for regulated release (3,4). Research studies have shown that neutrophils play a significant role in mediating the inflammatory response through the release of neutrophil elastase, which activates pro-inflammatory cytokines and degrades components of the extracellular matrix and Gram-negative bacteria (5). Mutations in the gene encoding neutrophil elastase, *ELA2*, have been implicated in hematological diseases such as cyclic and severe congenital neutropenia, which is characterized by defects in promyelocyte maturation (6,7).

Background References:

- (1) Belaouaj, A. et al. (2000) *Science* 289, 1185-8.
- (2) Tkalcovic, J. et al. (2000) *Immunity* 12, 201-10.
- (3) Gullberg, U. et al. (1999) *J Immunol Methods* 232, 201-10.
- (4) Takahashi, H. et al. (1988) *J Biol Chem* 263, 2543-7.
- (5) Adkison, A.M. et al. (2002) *J Clin Invest* 109, 363-71.
- (6) Horwitz, M. et al. (1999) *Nat Genet* 23, 433-6.
- (7) Bellanné-Chantelot, C. et al. (2004) *Blood* 103, 4119-25.

Specificity/Sensitivity: Neutrophil Elastase Antibody recognizes endogenous levels of total neutrophil elastase protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human neutrophil elastase protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using Neutrophil Elastase Antibody (upper) and β -Actin (D6A8) Rabbit mAb #8457 (lower). As expected, neutrophil elastase protein is not detected in Jurkat cells.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μ g/ml BSA and 50% glycerol. Store at -20°C . Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween[®]20 at 4°C with gentle shaking, overnight.

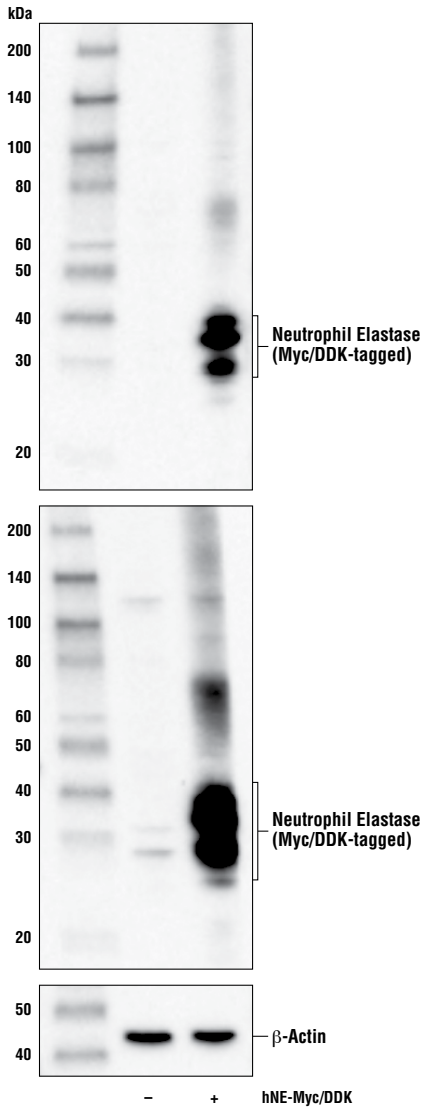
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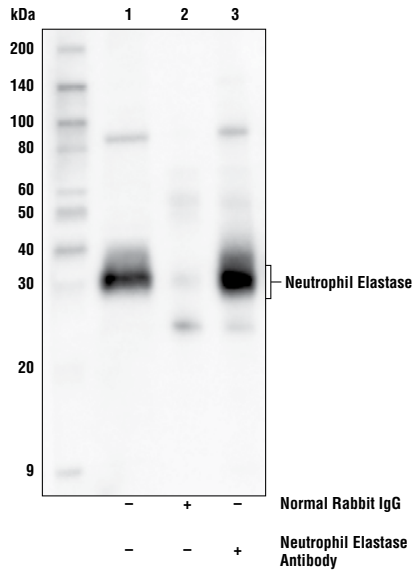
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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide Species Cross-Reactivity: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig S—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing Myc/DDK-tagged full-length human neutrophil elastase protein (hNE-Myc/DDK; +), using Neutrophil Elastase Antibody (upper), DYKDDDDK Tag Antibody #2368 (middle), and β -Actin (D6A8) Rabbit mAb #8457 (lower).



Immunoprecipitation of neutrophil elastase from THP-1 cell extracts. Lane 1 is 10% input, lane 2 is Normal Rabbit IgG #2729, and lane 3 is Neutrophil Elastase Antibody. Western blot analysis was performed using Neutrophil Elastase Antibody. Mouse Anti-Rabbit IgG (Conformation Specific) (L27A9) mAb (HRP Conjugate) #5127 was used for detection to avoid cross-reactivity with IgG.

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