

Neutrophil Elastase Antibody



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H	Sensitivity: Endogenous	MW (kDa): 30	Source/Isotype: Rabbit	UniProt ID: #P08246	Entrez-Gene Id: 1991
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

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

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.

Background

Neutrophil elastase is a 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. Tkalcevic, 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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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