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Neutrophil Elastase (E9C9L) XP[®] Rabbit mAb (Alexa Fluor[®] 594 Conjugate)

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

Applications: IF-IC, FC-FP	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #P08246	Entrez-Gene Id: 1991
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Product Usage Information

Application

Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50
1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

Neutrophil Elastase (E9C9L) XP[®] Rabbit mAb (Alexa Fluor[®] 594 Conjugate) recognizes endogenous levels of total neutrophil elastase protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human neutrophil elastase protein.

Description

This Cell Signaling Technology antibody is conjugated to Alexa Fluor[®] 594 fluorescent dye and tested in-house for direct flow cytometric and immunofluorescent analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated Neutrophil Elastase (E9C9L) XP[®] Rabbit mAb #89241.

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. Bellané-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).

Applications Key

IF-IC: Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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