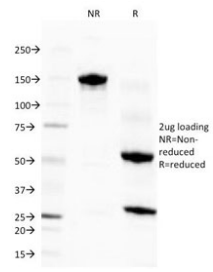
Eosinophil Peroxidase Antibody Clone EPO14 / EPX Antibody [clone EPO104] (V2303)

Catalog No.	Formulation	Size
V2303-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2303-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2303SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	EPO104
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	8288 (Human)
Localization	Cytoplasmic, granular
Applications	Flow Cytometry : 0.5-1ug/million cells Immunofluorescence : 0.5-1ug/ml
Limitations	This **Eosinophil Peroxidase antibody** is available for research use only.



Eosinophil Peroxidase Antibody Clone EPO14 SDS-PAGE Analysis. SDS-PAGE characterization of purified, BSA-free Eosinophil peroxidase / EPX antibody (clone EPO14) under non-reducing (NR) and reducing (R) conditions. A predominant band is observed at approximately 150 kDa under non-reducing conditions, consistent with intact IgG, while reducing conditions reveal bands at approximately 50 kDa and 25 kDa corresponding to heavy and light chains, respectively. The clean banding pattern confirms antibody integrity and purity with minimal degradation or contaminating proteins.

Description

Eosinophil peroxidase (EPX) is a heme-containing enzyme predominantly expressed in eosinophils and stored within cytoplasmic secondary granules, where it plays a central role in host defense and inflammatory responses. Eosinophil Peroxidase Antibody Clone EPO104 / EPX Antibody is designed to detect this granule-associated protein, enabling precise identification of eosinophil lineage cells and characterization of eosinophil-driven immune responses in tissue samples.

Eosinophil peroxidase antibody, also referred to as EPX antibody or EPO antibody, recognizes a major constituent of eosinophil granules that is released during degranulation and immune activation. EPX catalyzes oxidative reactions that contribute to antimicrobial activity and modulation of inflammatory signaling, making it both a structural and functional marker of eosinophil activity. Its expression is largely restricted to eosinophils, providing high specificity for distinguishing these cells from other leukocyte populations.

Clone EPO104 antibody targets Eosinophil peroxidase with specificity for eosinophil granule content, producing a distinct granular cytoplasmic staining pattern that reflects the dense packaging of EPX within secretory granules. This pattern enables clear discrimination of eosinophils from neutrophils, lymphocytes, and monocytes, which lack comparable EPX expression. The granular localization also provides strong morphological confirmation of eosinophil identity, particularly in tissues with mixed inflammatory infiltrates.

Eosinophils play important roles in allergic inflammation, asthma, parasitic infections, and eosinophil-associated disorders such as eosinophilic esophagitis. Detection of EPX using Eosinophil Peroxidase Antibody Clone EPO104 enables visualization of eosinophil infiltration, spatial distribution, and density within affected tissues. This supports analysis of immune cell recruitment and provides insight into disease-associated inflammatory microenvironments.

Beyond host defense, EPX contributes to tissue remodeling and injury through the generation of reactive oxygen species and interaction with extracellular matrix components. Its release during eosinophil activation can influence epithelial cells, fibroblasts, and immune signaling pathways, linking EPX expression to both protective immune responses and pathological tissue changes. As a result, EPX serves as a functional indicator of eosinophil activation as well as a lineage marker.

Eosinophil Peroxidase Antibody clone EPO104 enables reliable detection of EPX with strong granular cytoplasmic staining and minimal background signal. The consistent staining pattern and clear cellular specificity of clone EPO104 antibody make it well suited for research applications focused on eosinophil biology, immune cell identification, inflammatory disease mechanisms, and characterization of eosinophil-rich tissue responses.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Eosinophil Peroxidase Antibody Clone EPO14 to be titered up or down for optimal performance.

Immunogen

Human eosinophils from a patient with hypereosinophilic syndrome were used as the immunogen for this Eosinophil Peroxidase Antibody Clone EPO14.

Storage

Store the Eosinophil Peroxidase antibody at 2-8oC.

Alternate Names

EPX antibody, Eosinophil peroxidase antibody, EPO antibody, EPX clone EPO104 antibody, Eosinophil granule protein

antibody

References (2)