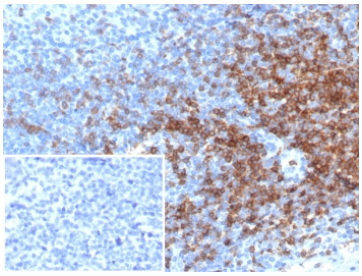
CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody [clone rC3e/6966] (V4208)

Catalog No.	Formulation	Size
V4208-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4208-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4208SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

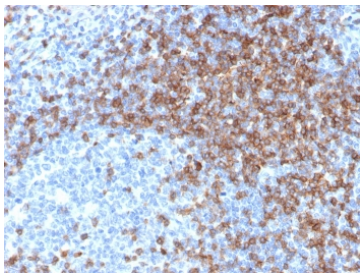
Recombinant | MOUSE MONOCLONAL

Bulk quote request

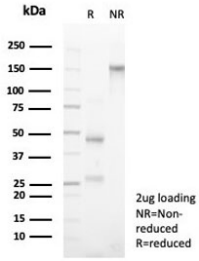
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rC3e/6966
Purity	Protein A/G affinity
UniProt	P07766
Localization	Cell surface, Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 minutes at RT
Limitations	This CD3 epsilon antibody is available for research use only.



CD3 epsilon Antibody Immunohistochemistry. Analysis of CD3 Epsilon / CD3E staining in FFPE human tonsil tissue using CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody with Clone rC3e/6966. Strong HRP-DAB brown membranous and cytoplasmic staining is observed in T lymphocytes within interfollicular and paracortical regions, consistent with pan T-cell lineage distribution, while surrounding non-lymphoid cells show minimal background. The inset shows the negative control with PBS used in place of the primary antibody, confirming absence of non-specific staining. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to antibody incubation.



CD3 epsilon Antibody Immunohistochemistry. Analysis of CD3 Epsilon / CD3E staining in FFPE human tonsil tissue using CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody with Clone rC3e/6966. Strong HRP-DAB brown membranous and cytoplasmic staining is observed in T lymphocytes concentrated within interfollicular and paracortical regions, while germinal center areas show reduced staining, consistent with pan T-cell lineage distribution. The staining pattern highlights the organization of CD3-positive lymphocytes within tonsillar lymphoid architecture. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to antibody incubation.



SDS-PAGE analysis of purified, BSA-free CD3 epsilon antibody (clone rC3e/6966) as confirmation of integrity and purity.

Description

CD3 epsilon (CD3E) is a membrane-associated protein that forms an essential component of the T-cell receptor (TCR) complex and is consistently expressed across T lymphocyte populations. CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody enables detection of CD3 epsilon / CD3E and is widely used to define T-cell identity within complex biological systems. CD3 epsilon antibody, also referred to as CD3E antibody, is commonly described as a pan T cell lineage marker antibody because its expression is restricted to T cells and maintained throughout T-cell development and maturation.

This CD3 epsilon Antibody is uniquely positioned for identifying and tracking T-cell lineage across diverse biological contexts. CD3 epsilon forms part of the CD3 complex that associates with the TCR and is required for T-cell development, selection, and functional maturation. Expression of CD3 epsilon reflects commitment to the T-cell lineage and is maintained from early thymocyte stages through mature peripheral T cells, making it a stable and reliable lineage-defining marker.

As a pan T cell lineage marker antibody, CD3 epsilon antibody reagents enable clear discrimination of T lymphocytes from other immune cell populations, including B cells, natural killer cells, and myeloid cells. This distinction is critical in studies involving heterogeneous samples, where accurate identification of T cells is necessary for interpreting immune composition and cellular interactions. CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody provides a consistent method for defining T-cell populations across experimental systems.

CD3 epsilon expression is conserved across developmental stages, supporting its use in studies of thymic differentiation, peripheral immune organization, and lineage tracing. Detection of CD3 epsilon allows researchers to follow T-cell populations through developmental transitions and across tissue environments. This makes CD3 epsilon antibody a central tool for studying T-cell biology at both cellular and system levels.

In tissue-based analyses, CD3 epsilon antibody reagents enable visualization of T-cell distribution within lymphoid organs and peripheral tissues. Detection of CD3-positive cells supports investigation of immune cell localization, tissue architecture, and spatial organization of lymphocytes within complex environments.

In cell-based systems, CD3 epsilon antibody reagents are used to quantify T-cell populations and define baseline immune composition. This supports studies of immune homeostasis, disease-associated changes in lymphocyte populations, and responses to experimental manipulation.

CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody provides a robust and lineage-defining tool for identifying T lymphocytes, supporting research focused on immune system organization, cellular identity, and lymphocyte population dynamics.

A full range of CD3e antibody reagents for immunohistochemistry, western blot, and flow cytometry is available on our CD3e Antibody collection page.

Application Notes

Optimal dilution of the CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-200) from the human protein was used as the immunogen for the CD3 epsilon Antibody / Pan T Cell Lineage Marker Antibody.

Storage

Aliquot the CD3 epsilon antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

CD3E antibody, CD3 epsilon lineage marker antibody, CD3 pan T cell marker antibody, CD3 T lymphocyte marker antibody, CD3 immune lineage antibody

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