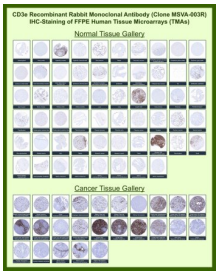
CD3e Antibody for IHC / CD3 Epsilon Immunohistochemistry Antibody [clone MSVA-003R] (V6139)

Catalog No.	Formulation	Size
V6139-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6139-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-003R
UniProt	P07766
Localization	Cell membrane
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This CD3E / CD3 epsilon antibody is available for research use only.



CD3e Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of CD3 epsilon chain / CD3E in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant rabbit monoclonal CD3e antibody clone MSVA-003R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates membranous and cytoplasmic localization in T lymphocyte populations, with strong signal observed in lymphoid tissues such as tonsil and lymph node, highlighting interfollicular and paracortical T-cell zones, while non-lymphoid parenchymal cells remain largely negative. Within tumor tissue microarrays, variable densities of tumor-infiltrating T lymphocytes are detected within stromal compartments and at invasive margins, supporting its use as a pan-T cell marker for evaluating immune infiltration. Evaluation across large TMA panels enables direct comparison of CD3E expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported CD3E expression profiles in the Human Protein Atlas.

Description

CD3 epsilon (CD3E) is a transmembrane component of the T-cell receptor (TCR) complex that is universally expressed in mature T lymphocytes and serves as a defining marker for T-cell identification in tissue sections. CD3e Antibody for IHC is specifically suited for detecting CD3 Epsilon / CD3E in formalin-fixed, paraffin-embedded samples, enabling clear visualization of T-cell distribution within intact tissue architecture. CD3e antibody, also known as CD3 epsilon antibody or CD3E antibody, is widely recognized in the literature as a pan-T cell marker antibody due to its consistent and robust expression across T-cell populations.

Within the TCR complex, CD3 epsilon associates with CD3 gamma, CD3 delta, and CD3 zeta chains to form a signaling-competent receptor that mediates antigen recognition and downstream activation. This functional role underlies its strong and stable expression in T cells across lymphoid and peripheral tissues. As a result, CD3e antibody reagents are foundational tools for visualizing adaptive immune components directly in tissue sections, where preservation of morphology is critical for interpretation.

In immunohistochemistry, CD3e Antibody for IHC provides distinct membranous and cytoplasmic staining in T lymphocytes, allowing precise identification of T-cell populations within complex tissue environments. This staining pattern enables clear separation of T cells from surrounding epithelial, stromal, and other immune cell types. In normal tissues such as tonsil, lymph node, and thymus, CD3 epsilon immunohistochemistry highlights dense T-cell zones including interfollicular regions and paracortical areas, while in non-lymphoid tissues it reveals scattered resident or infiltrating T cells within mucosal and stromal compartments.

This CD3e Antibody for IHC is uniquely positioned for tissue-based immune profiling through extensive validation on tissue microarrays. Using clone MSVA-003R, a recombinant rabbit monoclonal antibody, consistent and high-contrast staining is observed across a broad panel of normal human tissues. The TMA format enables side-by-side comparison of staining patterns across organ systems, demonstrating expected localization of CD3-positive lymphocytes while maintaining low background in non-target cells. This level of cross-tissue consistency reinforces the reliability of the antibody for large-scale tissue studies and comparative pathology applications.

The inclusion of cancer tissue microarrays further strengthens the utility of this CD3e antibody for evaluating tumor-associated immune responses. Across multiple tumor types, CD3 epsilon staining highlights tumor-infiltrating lymphocytes within stromal compartments and at invasive margins, providing clear visualization of immune cell distribution relative to tumor architecture. Variability in T-cell density across tumor samples is readily detectable, supporting studies of immune heterogeneity and tumor microenvironment characterization. The ability to detect these patterns reproducibly across TMA panels makes this CD3e Antibody for IHC particularly valuable for high-throughput tissue analysis.

Clone MSVA-003R has been developed to deliver strong, specific staining in FFPE tissues, with performance characteristics that support consistent interpretation across both normal and diseased samples. Its recombinant rabbit monoclonal format contributes to reproducible signal intensity and low non-specific background, which are critical for immunohistochemical applications. By combining robust staining quality with extensive TMA validation, this CD3e Antibody for IHC serves as a reliable tool for identifying T cells and mapping immune landscapes in tissue-based research settings.

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

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the CD3e Antibody for IHC / CD3 Epsilon Immunohistochemistry Antibody should be determined by the researcher.

2. This CD3E / CD3 epsilon antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Synthetic peptide from human CD3e protein (around amino acids 20-40) (exact sequence is proprietary) was used as the immunogen for the CD3e Antibody for IHC / CD3 Epsilon Immunohistochemistry Antibody.

Storage

CD3E / CD3 epsilon antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

CD3E antibody, CD3 epsilon T cell marker antibody, CD3 immunohistochemistry antibody, pan T cell marker antibody, T cell receptor complex antibody

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