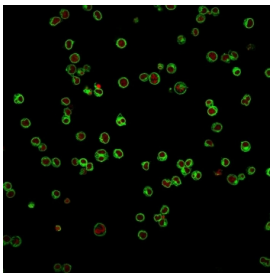
CD3e Antibody Clone UCHT1 / CD3 Epsilon Monoclonal Antibody [clone UCHT1] (V3760)

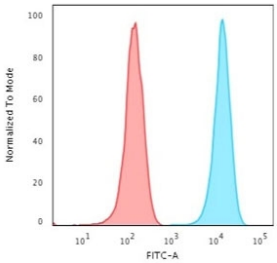
Catalog No.	Formulation	Size
V3760-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3760-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3760SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

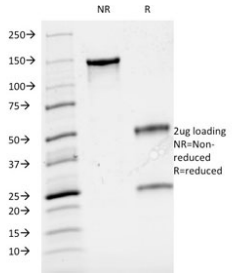
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	UCHT1
Purity	Protein G affinity chromatography
UniProt	P07766
Localization	Cell surface and cytoplasmic
Applications	ELISA : 2-4ug/ml (order BSA/azide-free format) Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-2ug/ml Immunohistochemistry (Acetone-fixed Frozen Tissues) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
Limitations	This CD3e antibody is available for research use only.



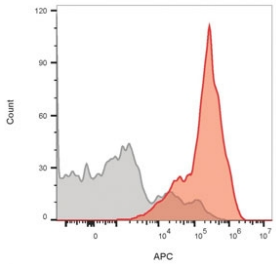
CD3e Antibody Clone UCHT1. Immunofluorescence analysis of CD3 Epsilon / CD3E antibody staining in human Jurkat cells using CD3e Antibody Clone UCHT1 / CD3 Epsilon Monoclonal Antibody. CD3-positive T cells are visualized as bright green membrane-associated fluorescence outlining the cell surface, consistent with localization of the T-cell receptor complex. Reddot nuclear stain (red) labels cell nuclei, providing clear cellular context. The staining demonstrates uniform CD3 expression across Jurkat cells with strong signal intensity and minimal background, supporting reliable detection of CD3 epsilon at the cell surface.



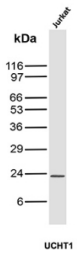
Flow cytometry testing of human Jurkat cells with CD3e antibody (clone UCHT1); Red=isotype control, Blue= CD3e antibody.



SDS-PAGE analysis of purified, BSA-free CD3e antibody (clone UCHT1) as confirmation of integrity and purity.



Flow cytometry staining of lymphocyte-gated human PBM cells with CF640R-labeled CD3e antibody (clone UCHT1). Gray=unstained, Red=CF640R-CD3e antibody.



CD3e Antibody Clone UCHT1. Western blot analysis of CD3 Epsilon / CD3E antibody in human Jurkat cell lysate using CD3e Antibody Clone UCHT1 / CD3 Epsilon Monoclonal Antibody. Lane 1: human Jurkat cell lysate. A band is detected at approximately 23 kDa, consistent with the predicted molecular weight of CD3 epsilon. The single, well-defined band with minimal background supports specific target recognition and reliable detection of CD3 epsilon in T-cell lysates.

Description

CD3 epsilon (CD3E) is a membrane-associated signaling component of the T-cell receptor (TCR) complex that is uniformly expressed on T lymphocytes and is essential for antigen recognition and downstream signaling. CD3e Antibody Clone UCHT1 / CD3 Epsilon Monoclonal Antibody enables detection of CD3 Epsilon / CD3E and serves as a foundational reagent for identifying T-cell populations. CD3e antibody, also known as CD3 epsilon antibody or CD3E antibody, is widely recognized as a pan-T cell marker antibody and is central to studies of adaptive immunity.

Within the TCR complex, CD3 epsilon associates with CD3 gamma, CD3 delta, and CD3 zeta chains to form a signaling unit that couples with the TCR alpha-beta or gamma-delta heterodimer. This complex is localized at the cell surface and

is responsible for initiating intracellular signaling cascades following antigen engagement. These pathways regulate T-cell activation, proliferation, differentiation, and effector function, making CD3 epsilon a critical molecule for studying immune responses. Because of its stable and consistent expression, CD3e antibody reagents are widely used to define T-cell populations across a variety of experimental systems.

CD3e Antibody Clone UCHT1 is uniquely positioned as a high-confidence, widely adopted reagent due to its extensive presence in peer-reviewed literature, with over one thousand publications referencing its use. This broad literature representation reflects long-standing use across diverse immunological applications and provides strong support for its reliability as a CD3 detection tool. The widespread adoption of clone UCHT1 makes it a reference-standard reagent for many researchers, particularly in studies where consistency with established methods is important.

In experimental workflows, CD3e antibody reagents are used to identify T cells within complex biological samples, including peripheral blood, lymphoid tissues, and cultured cell populations. The ability to accurately detect CD3-positive cells is fundamental for downstream analyses such as T-cell subset characterization, immune profiling, and signaling studies. Clone UCHT1 supports these applications by providing consistent and reproducible detection of CD3 epsilon across sample types.

The extensive literature footprint of clone UCHT1 also enhances its value in comparative and translational studies. Researchers frequently select highly cited clones to align their experimental design with previously published data, improving comparability and interpretability of results. This is particularly relevant in large-scale studies or collaborative projects where standardization of reagents contributes to reproducibility.

As a monoclonal antibody, clone UCHT1 provides consistent epitope recognition and stable performance across experiments. Its long-standing use in the field, combined with strong literature support, positions CD3e Antibody Clone UCHT1 as a reliable and well-established tool for detecting CD3 epsilon. This clone remains a cornerstone reagent for T-cell identification and analysis in immunology research.

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 CD3e Antibody Clone UCHT1 / CD3 Epsilon Monoclonal Antibody should be determined by the researcher.

Immunogen

Human infant thymocytes and peripheral blood lymphocytes from a Sezary Syndrome donor were used as the immunogen for the CD3e Antibody Clone UCHT1 / CD3 Epsilon Monoclonal Antibody.

Storage

Store the CD3e antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD3E antibody, CD3 epsilon UCHT1 antibody, CD3 UCHT1 monoclonal antibody, CD3 T cell marker antibody, CD3 antigen epsilon chain antibody