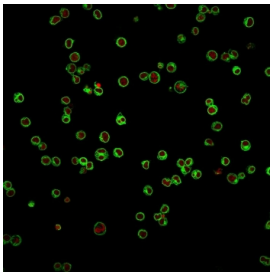
CD3e Antibody [clone UCHT1] (V3760)

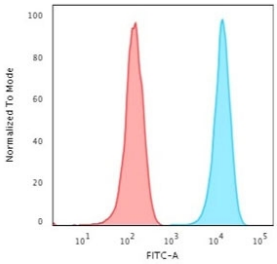
Catalog No.	Formulation	Size
V3760-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3760-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3760SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

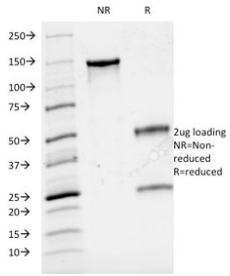
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	UCHT1
Purity	Protein G affinity chromatography
UniProt	P07766
Localization	Cell surface and cytoplasmic
Applications	ELISA : 2-4ug/ml (order BSA/azide-free 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.



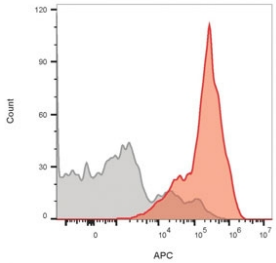
Immunofluorescent staining of human Jurkat cells with CD3e antibody (clone UCHT1, green) and Reddot nuclear stain (red).



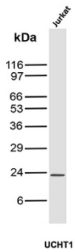
Flow cytometry testing of human Jurkat cells with CD3e antibody (clone UCHT1); Red=isotype control, Blue= CD3e antibody.



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.



Western blot testing of human Jurkat cell lysate with CD3e antibody (clone UCHT1). Predicted molecular weight ~23 kDa.

Description

CD3e antibody detects the epsilon chain of the CD3 complex, a transmembrane signaling protein encoded by the CD3E gene. CD3e is part of the T cell receptor complex and plays a critical role in initiating signaling cascades when T cells recognize antigens presented by major histocompatibility complex molecules. This indispensable function makes CD3e an important subject in immunology, oncology, and translational medicine.

The CD3 complex is composed of CD3 gamma, delta, epsilon, and zeta chains, which surround the T cell receptor alpha and beta heterodimer. CD3e contains immunoreceptor tyrosine-based activation motifs that recruit kinases and adaptor proteins, triggering pathways such as MAP kinase, PI3 kinase, and NF kappa B. These pathways lead to T cell activation, proliferation, and effector function. Loss of CD3e disrupts T cell development, emphasizing its essential role in immune biology.

The CD3e antibody clone UCHT1 has been widely used in immunological studies for decades. Peer-reviewed publications have cited this clone in research examining T cell activation, signaling, and immune regulation. Its robust and specific recognition of the CD3e chain has made it a standard tool in both basic research and clinical applications. Clone UCHT1 is employed to identify T cells, study receptor signaling, and evaluate immune responses across human samples.

Research using clone UCHT1 has clarified how CD3e expression defines the T cell lineage and supports functional studies of effector and regulatory subsets. It is also valuable in translational research, where CD3 detection contributes to immunotherapy studies and the development of engineered T cell therapies. Because CD3e is expressed on nearly all mature T cells, this antibody is an indispensable marker in immunology.

NSJ Bioreagents provides this CD3e antibody to support studies of T cell biology, signaling pathways, and immune regulation. The protein is also described as CD3 epsilon chain antibody, T cell receptor complex epsilon chain antibody, T cell surface glycoprotein CD3 epsilon antibody, and immunoreceptor tyrosine-based activation motif containing protein antibody.

Application Notes

Optimal dilution of the CD3e 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.

Storage

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