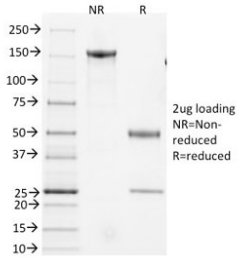
CD3e Antibody / CD3 epsilon [clone 145-2C11] (V8271)

Catalog No.	Formulation	Size
V8271-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8271-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8271SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Purified
Clonality	Monoclonal (hamster origin)
Isotype	Armenian Hamster IgG, kappa
Clone Name	145-2C11
Purity	Protein A affinity chromatography
UniProt	P07766
Localization	Cell surface, cytoplasmic
Applications	Functional Studies (order BSA/azide-free Format) : Flow Cytometry : 1-2ug/10^6 cells Immunofluorescence : 1-2ug/ml
Limitations	This CD3e antibody is available for research use only.



SDS-PAGE analysis of purified, BSA-free CD3e antibody (clone 145-2C11) as confirmation of integrity and purity.

Description

CD3e antibody detects the epsilon chain of the CD3 complex, a critical component of the T-cell receptor-CD3 signaling machinery encoded by the CD3E gene. CD3 epsilon, together with gamma, delta, and zeta chains, anchors the T-cell receptor and transmits activation signals following antigen recognition. Because CD3 is expressed on nearly all mature T cells, CD3e antibody is a core reagent for immunology, oncology, and translational research.

CD3 epsilon is a transmembrane protein with extracellular immunoglobulin-like domains and a cytoplasmic tail containing immunoreceptor tyrosine-based activation motifs (ITAMs). When the T-cell receptor engages an antigen-MHC complex, phosphorylation of these ITAMs recruits kinases such as Lck and Zap70, initiating signaling cascades that activate transcription factors including NFAT and NF-ÃŽÂºB. This results in T-cell proliferation, differentiation, and cytokine production, linking antigen recognition to adaptive immunity.

The CD3e antibody clone 145-2C11 is widely used in both basic and applied research. Clone 145-2C11 has been cited in peer-reviewed publications exploring T-cell development, thymic selection, and immune synapse formation. It has also been used extensively in mouse models, where engagement of CD3e by this antibody can modulate T-cell function, providing a valuable tool in immunotherapy and experimental immunology.

Research using clone 145-2C11 has demonstrated how CD3e engagement supports mechanistic studies of T-cell activation, tolerance, and exhaustion. In oncology, this antibody has been applied in mouse tumor models to study how T-cell responses can be redirected against cancer. It has also been used to investigate autoimmune disorders and infectious disease, where T-cell activity is central to disease outcome. Its reproducibility and historical significance make it a dependable antibody for both mechanistic and translational studies.

NSJ Bioreagents provides this CD3e antibody to support immunology, oncology, and therapeutic research. Alternate designations include CD3 epsilon chain antibody, T-cell receptor-associated protein epsilon antibody, T-cell surface glycoprotein CD3e antibody, T-cell activation marker antibody, and TCR-CD3 complex antibody.

Application Notes

Optimal dilution of the CD3e antibody should be determined by the researcher.

Immunogen

The H2Kb-specific mouse cytotoxic T lymphocyte clone BM10 37 was 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).