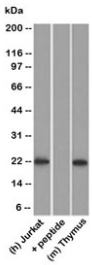
CD3e Antibody for WB / CD3 Epsilon Western Blot Antibody (V2033)

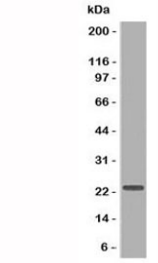
Catalog No.	Formulation	Size
V2033-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2033-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2033SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Protein A purified CD3e antibody
Buffer	1X PBS, pH 7.4
Gene ID	916
Localization	Cytoplasmic
Applications	Western Blot : 1-2ug/ml for 60 min at RT
Limitations	This **CD3e antibody** is available for research use only.



CD3e Antibody for WB. Western blot analysis of CD3 Epsilon / CD3E antibody in lysates using CD3e Antibody for WB / CD3 Epsilon Western Blot Antibody. Lane 1: human Jurkat cell lysate, Lane 2: human Jurkat lysate pre-incubated with immunizing peptide, Lane 3: mouse thymus lysate. A band is detected at approximately 20-25 kDa in Jurkat and thymus samples, consistent with the predicted molecular weight of CD3 epsilon. Signal is specifically reduced in the peptide-blocked condition, supporting target specificity of the antibody. The presence of a clear band in both human and mouse T-cell-rich samples aligns with the known expression of CD3 epsilon in lymphoid tissues.



CD3e Antibody for WB Jurkat. Western blot testing of CD3 Epsilon / CD3E antibody in human Jurkat cell lysate using CD3e Antibody for WB / CD3 Epsilon Western Blot Antibody. Lane 1: human Jurkat cell lysate. A band is detected at approximately 20-25 kDa, consistent with the predicted molecular weight of CD3 epsilon. The clear, well-defined band with minimal background supports specific detection of CD3 epsilon and reliable performance in western blot analysis of T-cell-derived lysates.

Description

CD3 epsilon (CD3E) is a membrane-associated signaling component of the T-cell receptor (TCR) complex that is consistently expressed in T lymphocytes and is essential for antigen recognition and downstream signal transduction. CD3e Antibody for WB / CD3 Epsilon Western Blot Antibody is specifically optimized for detecting CD3 Epsilon / CD3E in protein lysates, enabling direct analysis of TCR complex components at the protein level. CD3e antibody, also known as CD3 epsilon antibody or CD3E antibody, is widely recognized as a pan-T cell marker antibody and is commonly used in western blot workflows to confirm T-cell-derived protein expression.

CD3 epsilon forms part of the CD3 signaling complex together with CD3 gamma, CD3 delta, and CD3 zeta chains, which associate with the TCR alpha-beta or gamma-delta heterodimer at the cell membrane. This complex is required for initiating intracellular signaling cascades following antigen engagement. Because CD3 epsilon is a structural and functional component of this receptor complex, detection by western blot provides a direct measure of TCR-associated protein expression in T-cell lysates.

In western blot analysis, CD3e Antibody for WB typically detects a band corresponding to CD3 epsilon at approximately 20-25 kDa, consistent with the predicted molecular weight of the protein. This band is most prominently observed in T-cell-derived lysates such as Jurkat cells, which are widely used as a model system for studying TCR signaling. The presence of a clear, well-defined band at this molecular weight supports accurate identification of CD3 epsilon and confirms expression of T-cell receptor components within the sample.

This CD3e Antibody for WB is uniquely positioned for validating T-cell identity and assessing TCR complex integrity at the protein level. In experimental workflows, western blotting is frequently used to confirm expression of CD3 epsilon following cell isolation, enrichment, or experimental manipulation. The ability to detect CD3 epsilon in lysates provides a complementary approach to cell-based assays such as flow cytometry and immunofluorescence, enabling cross-validation of T-cell presence and protein expression.

Because CD3 epsilon is a membrane-associated protein within a multi-subunit complex, efficient extraction and solubilization are important for optimal detection in western blot analysis. Appropriate lysis conditions help ensure release of CD3 epsilon from the membrane while maintaining its detectability as a discrete band during SDS-PAGE separation. Under these conditions, CD3e antibody reagents enable consistent visualization of CD3 epsilon with minimal background signal.

Western blot detection of CD3 epsilon can also provide insight into protein stability and experimental effects on TCR components. Changes in band intensity may reflect alterations in protein expression, degradation, or cellular signaling states. This makes CD3e antibody reagents useful for monitoring T-cell responses in experimental systems involving activation, inhibition, or environmental stress.

CD3e Antibody for WB delivers reliable detection of CD3 epsilon with strong band clarity and reproducible performance across experiments. It is well suited for protein-level analysis of T-cell biology, supporting studies of TCR signaling, immune function, and cellular identity in western blot-based assays. This antibody is part of a broader CD3e antibody panel offered by NSJ Bioreagents.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the CD3e Antibody for WB / CD3 Epsilon Western Blot Antibody to be titered up or down for optimal performance.

Immunogen

Amino acids ERPPPVPNPDYEP (156-168) were used as the immunogen for this CD3e Antibody for WB / CD3 Epsilon Western Blot Antibody. This sequence is from the cytoplasmic portion of the protein.

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 western blot antibody, CD3 epsilon WB antibody, CD3 TCR complex antibody, CD3 protein detection antibody

References (2)