

Anti-CD3 zeta Antibody [JE09-37]

HA722692



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Rat
Applications:	WB, IHC-P, IF-Tissue
Molecular Wt:	Predicted band size: 19 kDa
Clone number:	JE09-37

Description: T-cell surface glycoprotein CD3 zeta chain also known as T-cell receptor T3 zeta chain or CD247 (Cluster of Differentiation 247) is a protein that in humans is encoded by the CD247 gene. Some older literature mention a similar protein called "CD3 eta" in mice. It is now understood to be an isoform differing in the last exon. T-cell receptor zeta (ζ), together with T-cell receptor alpha/beta and gamma/delta heterodimers and CD3-gamma, -delta, and -epsilon, forms the T-cell receptor-CD3 complex. The zeta chain plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. Low expression of the antigen results in impaired immune response. Two alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.

Immunogen: Synthetic peptide within human CD3 zeta aa 115-164 / 164.

Positive control: Jurkat cell lysate, human spleen tissue, human thymus tissue, human tonsil tissue, rat spleen tissue.

Subcellular location: Cell membrane.

Database links: SwissProt: P20963 Human
Entrez Gene: 25300 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
IF-Tissue	1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

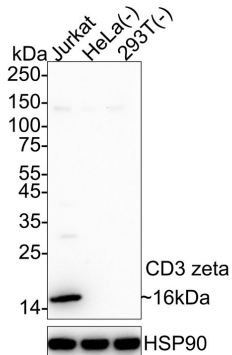
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Images

Fig1: Western blot analysis of CD3 zeta on different lysates with Rabbit anti-CD3 zeta antibody (HA722692) at 1/1,000 dilution.

Lane 1: Jurkat cell lysate
Lane 2: HeLa cell lysate (negative)
Lane 3: 293T cell lysate (negative)



Lysates/proteins at 20 µg/Lane.

Predicted band size: 19 kDa
Observed band size: 16 kDa

Exposure time: 59 seconds; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722692) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

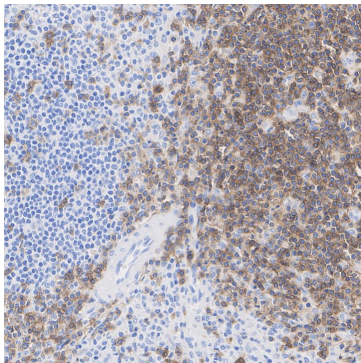


Fig2: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rabbit anti-CD3 zeta antibody (HA722692) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA722692) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

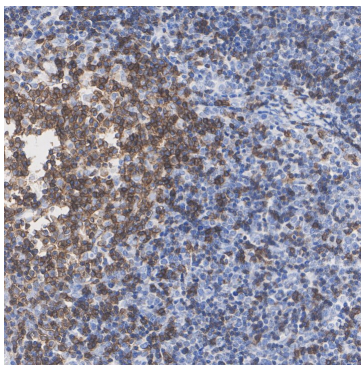


Fig3: Immunohistochemical analysis of paraffin-embedded human thymus tissue with Rabbit anti-CD3 zeta antibody (HA722692) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA722692) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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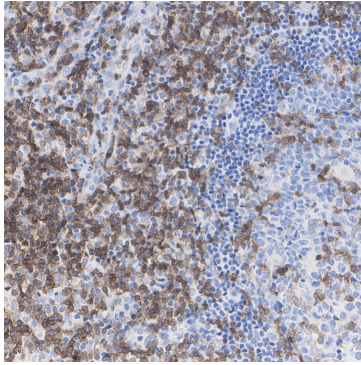


Fig4: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-CD3 zeta antibody (HA722692) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA722692) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

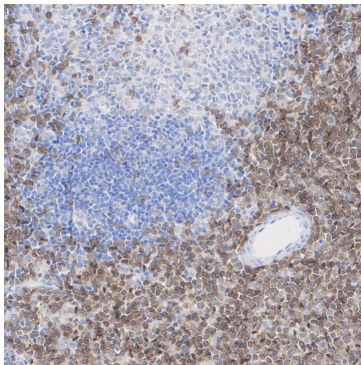


Fig5: Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-CD3 zeta antibody (HA722692) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA722692) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

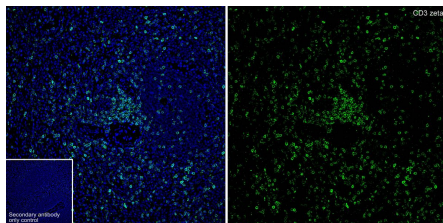


Fig6: Application: IF-Tissue

Species: Human

Site: Spleen

Sample: Paraffin-embedded section

Antibody concentration: 1/200

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Velasco Cárdenas RM et al. Harnessing CD3 diversity to optimize CAR T cells. *Nat Immunol.* 2023 Dec
2. Kath J et al. Integration of zeta-deficient CARs into the CD3-zeta gene conveys potent cytotoxicity in T and NK cells. *Blood.* 2024 Mar

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