Anti-CSK Antibody [JE39-68]

HA722403

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 51 kDa
Clone number:	JE39-68

Description: Tyrosine-protein kinase CSK also known as C-terminal Src kinase is an enzyme that, in humans, is encoded by the CSK gene. This enzyme phosphorylates tyrosine residues located in the C-terminal end of Src-family kinases (SFKs) including SRC, HCK, FYN, LCK, LYN and YES1. This Non-receptor tyrosine-protein kinase plays an important role in the regulation of cell growth, differentiation, migration and immune response. CSK acts by suppressing the activity of the Src family of protein kinases by phosphorylation of Src family members at a conserved C-terminal tail site in Src. Upon phosphorylation by other kinases, Src-family members engage in intramolecular interactions between the phosphotyrosine tail and the SH2 domain that result in an inactive conformation. To inhibit SFKs, CSK is then recruited to the plasma membrane via binding to transmembrane proteins or adapter proteins located near the plasma membrane and ultimately suppresses signaling through various surface receptors, including T-cell receptor (TCR) and B-cell receptor (BCR) by phosphorylating and maintaining inactive several effector molecules.

Immunogen: Synthetic peptide within Human CSK aa 50-150.

Positive control: Ramos cell lysate, Jurkat cell lysate, Raji cell lysate, HeLa cell lysate, Mouse spleen tissue lysate, Rat spleen tissue lysate, Mouse lung tissue lysate, MCF7 cell lysate, MDA-MB-231 cell lysate, SH-SY5Y cell lysate, RAW264.7 cell lysate, C6 cell lysate, human tonsil tissue, mouse spleen tissue, rat spleen tissue.

Subcellular location: Cytoplasm, Cell membrane.

Database links: SwissProt: P41240 Human | P41241 Mouse | P32577 Rat

Recommended Dilutions:

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

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

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

Purity: Protein A affinity purified.

Images

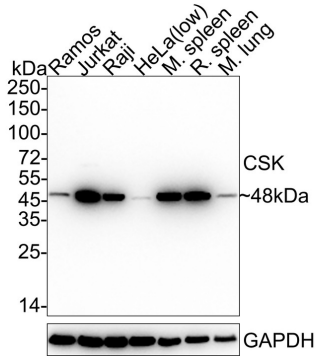

Fig1: Western blot analysis of CSK on different lysates with Rabbit anti-CSK antibody (HA722403) at 1/1,000 dilution.

Lane 1: Ramos cell lysate (20 µg/Lane)
Lane 2: Jurkat cell lysate (20 µg/Lane)
Lane 3: Raji cell lysate (20 µg/Lane)
Lane 4: HeLa cell lysate (low expression) (20 µg/Lane)
Lane 5: Mouse spleen tissue lysate (40 µg/Lane)
Lane 6: Rat spleen tissue lysate (40 µg/Lane)
Lane 7: Mouse lung tissue lysate (40 µg/Lane)

Predicted band size: 51 kDa
Observed band size: 48 kDa
Exposure time: 2 minutes 22 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 (HA722403) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

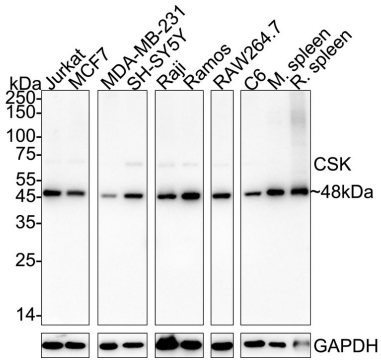

Fig2: Western blot analysis of CSK on different lysates with Rabbit anti-CSK antibody (HA722403) at 1/1,000 dilution.

Lane 1: Jurkat cell lysate (20 µg/Lane)
Lane 2: MCF7 cell lysate (20 µg/Lane)
Lane 3: MDA-MB-231 cell lysate (20 µg/Lane)
Lane 4: SH-SY5Y cell lysate (20 µg/Lane)
Lane 5: Raji cell lysate (20 µg/Lane)
Lane 6: Ramos cell lysate (20 µg/Lane)
Lane 7: RAW264.7 cell lysate (20 µg/Lane)
Lane 8: C6 cell lysate (20 µg/Lane)
Lane 9: Mouse spleen tissue lysate (40 µg/Lane)
Lane 10: Rat spleen tissue lysate (40 µg/Lane)

Predicted band size: 51 kDa
Observed band size: 48 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 (HA722403) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

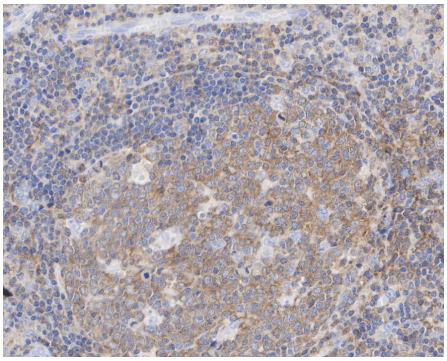

Fig3: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-CSK antibody (HA722403) at 1/200 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (HA722403) at 1/200 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.

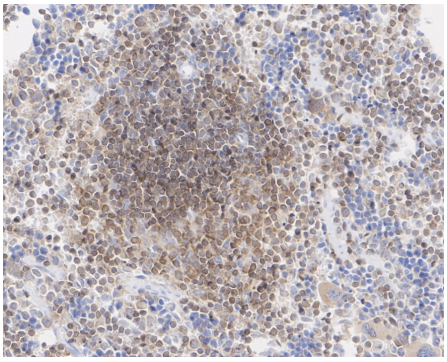

Fig4: Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-CSK antibody (HA722403) at 1/200 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (HA722403) at 1/200 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.

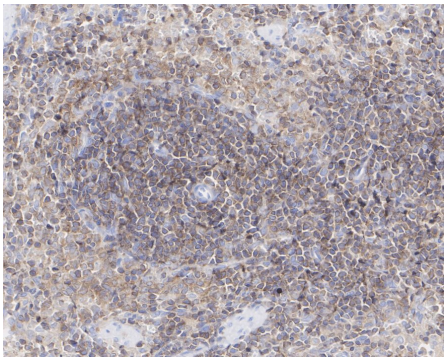

Fig5: Immunohistochemical analysis of paraffin-embedded rat spleen tissue with Rabbit anti-CSK antibody (HA722403) at 1/200 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (HA722403) at 1/200 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.

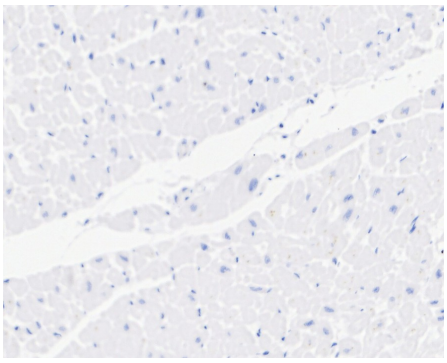

Fig6: Immunohistochemical analysis of paraffin-embedded human heart tissue (negative) with Rabbit anti-CSK antibody (HA722403) at 1/200 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (HA722403) at 1/200 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.

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

Background References

1. Maldonado H et al. CSK-mediated signalling by integrins in cancer. Front Cell Dev Biol. 2023 Jul
2. Zhu S et al. Regulation, targets and functions of CSK. Front Cell Dev Biol. 2023 Jun