Anti-Chk1 Antibody [JE00-39]

HA722855

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IP
Molecular Wt:	Predicted band size: 54 kDa
Clone number:	JE00-39

Description: Checkpoint kinases (Chks) are protein kinases that are involved in cell cycle control. Two checkpoint kinase subtypes have been identified, Chk1 and Chk2. Chk1 is a central component of genome surveillance pathways and is a key regulator of the cell cycle and cell survival. Chk1 is required for the initiation of DNA damage checkpoints and has recently been shown to play a role in the normal (unperturbed) cell cycle. Chk1 impacts various stages of the cell cycle including the S phase, G2/M transition and M phase.In addition to mediating cell cycle checkpoints, Chk1 also contributes to DNA repair processes, gene transcription, egg production, embryo development, cellular responses to HIV infection and somatic cell viability.

Immunogen: Recombinant protein within

Positive control: HeLa cell lysate, K-562 cell lysate, A431 cell lysate, NIH/3T3 cell lysate, PC-12 cell lysate, HeLa.

Subcellular location: Nucleus, Chromosome, Cytoplasm, cytoskeleton, microtubule organizing center, centrosome

Database links: SwissProt: O14757 Human | O35280 Mouse | Q91ZN7 Rat

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:50
IP	1-2μg/sample

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

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

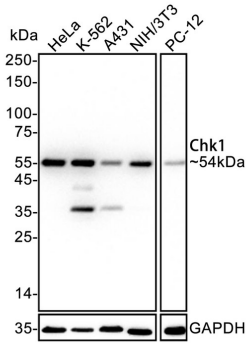

Fig1: Western blot analysis of Chk1 on different lysates with Rabbit anti-Chk1 antibody (HA722855) at 1/1,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: K-562 cell lysate
Lane 3: A431 cell lysate
Lane 4: NIH/3T3 cell lysate
Lane 5: PC-12 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 54 kDa
Observed band size: 54 kDa

Exposure time: 25 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 (HA722855) 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.

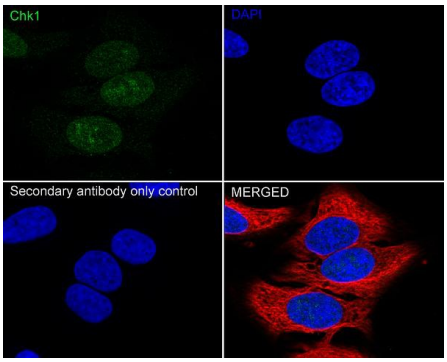

Fig2: Immunocytochemistry analysis of HeLa cells labeling Chk1 with Rabbit anti-Chk1 antibody (HA722855) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Chk1 antibody (HA722855) at 1/50 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

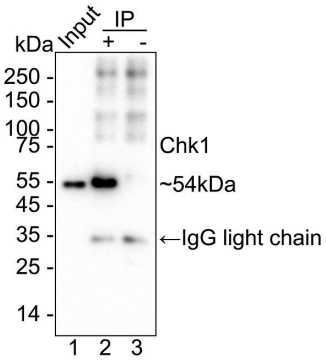

Fig3: Chk1 was immunoprecipitated from 0.2 mg HeLa cell lysate with HA722855 at 2 µg/25 µl agarose. Western blot was performed from the immunoprecipitate using HA722855 at 1/1,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: HeLa cell lysate (input)
Lane 2: HA722855 IP in HeLa cell lysate
Lane 3: Rabbit IgG instead of HA722855 in HeLa cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 20 seconds; ECL: K1801

Background References

1. Dent P. Investigational CHK1 inhibitors in early phase clinical trials for the treatment of cancer. Expert Opin Investig Drugs. 2019 Dec;28(12):1095-1100. doi: 10.1080/13543784.2019.1694661. Epub 2019 Nov 29. PMID: 31783714.
2. Carrassa L, Damia G. Unleashing Chk1 in cancer therapy. Cell Cycle. 2011 Jul 1;10(13):2121-8. doi: 10.4161/cc.10.13.16398. Epub 2011 Jul 1. PMID: 21610326.