

Anti-Phospho-Chk2 (T68) Antibody [JE43-12]

HA721633



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB
Molecular Wt:	Predicted band size: 61 kDa
Clone number:	JE43-12

Description:	CHEK2 (Checkpoint kinase 2) is a tumor suppressor gene that encodes the protein CHK2, a serine-threonine kinase. CHK2 is involved in DNA repair, cell cycle arrest or apoptosis in response to DNA damage. Mutations to the CHEK2 gene have been linked to a wide range of cancers. The CHEK2 gene encodes for checkpoint kinase 2 (CHK2), a protein that acts a tumor suppressor. CHK2 regulates cell division, and has the ability to prevent cells from dividing too rapidly or in an uncontrolled manner. When DNA undergoes a double-strand break, CHK2 is activated. Specifically, DNA damage-activated phosphatidylinositol kinase family protein (PIKK) ATM phosphorylates site Thr68 and activates CHK2.[6] Once activated, CHK2 phosphorylates downstream targets including CDC25 phosphatases, responsible for dephosphorylating and activating the cyclin-dependent kinases (CDKs). Thus, CHK2's inhibition of the CDC25 phosphatases prevents entry of the cell into mitosis. Furthermore, the CHK2 protein interacts with several other proteins including p53 (p53). Stabilization of p53 by CHK2 leads to cell cycle arrest in phase G1. Furthermore, CHK2 is known to phosphorylate the cell-cycle transcription factor E2F1 and the promyelocytic leukemia protein (PML) involved in apoptosis (programmed cell death).
Immunogen:	Synthetic phosphopeptide corresponding to residues surrounding Thr68 of human Chk2.
Positive control:	HeLa treated with 20μM Etoposide for 2 hours cell lysate, Jurkat treated with 25μM Etoposide for 5 hours cell lysate, NIH/3T3 treated with 25μM Etoposide for 5 hours cell lysate, C6 treated with 25μM Etoposide for 5 hours cell lysate.
Subcellular location:	Nucleus.
Database links:	SwissProt: O96017 Human Q9Z265 Mouse Entrez Gene: 114212 Rat
Recommended Dilutions:	
WB	1:2,000
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.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

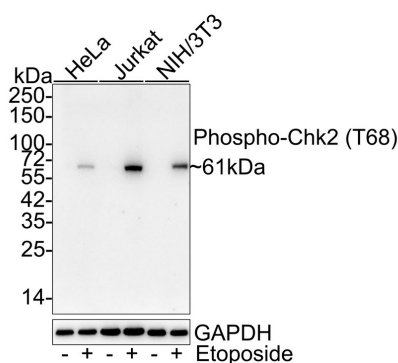


Fig1: Western blot analysis of Phospho-Chk2 (T68) on different lysates with Rabbit anti-Phospho-Chk2 (T68) antibody (HA721633) at 1/2,000 dilution.

Lane 1: HeLa cell lysate

Lane 2: HeLa treated with 20 μ M Etoposide for 2 hours cell lysate

Lane 3: Jurkat cell lysate

Lane 4: Jurkat treated with 25 μ M Etoposide for 5 hours cell lysate

Lane 5: NIH/3T3 cell lysate

Lane 6: NIH/3T3 treated with 25 μ M Etoposide for 5 hours cell lysate

Lysates/proteins at 20 μ g/Lane.

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 5 minutes;

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 (HA721633) at 1/2,000 dilution was used in 5% NFDM/TBST at 4 $^{\circ}$ C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:50,000 dilution was used for 1 hour at room temperature.

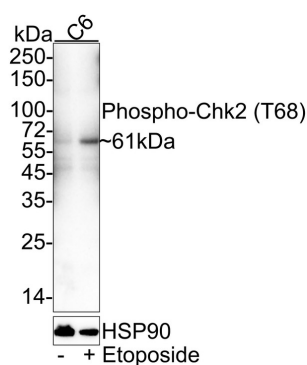


Fig2: Western blot analysis of Phospho-Chk2 (T68) on different lysates with Rabbit anti-Phospho-Chk2 (T68) antibody (HA721633) at 1/1,000 dilution.

Lane 1: C6 cell lysate

Lane 2: C6 treated with 25 μ M Etoposide for 5 hours cell lysate

Lysates/proteins at 20 μ g/Lane.

Predicted band size: 61 kDa

Observed band size: 61 kDa

Exposure time: 1 minute 2 seconds;

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 (HA721633) at 1/1,000 dilution was used in 5% NFDM/TBST at 4 $^{\circ}$ C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:50,000 dilution was used for 1 hour at room temperature.

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

Background References

1. Guo QQ et al. ATM-CHK2-Becn1 axis promotes autophagy to maintain ROS homeostasis under oxidative stress. EMBO J. 2020 May
2. Chen Y et al. CHK2-FOXK axis promotes transcriptional control of autophagy programs. Sci Adv. 2020 Jan

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