abcam

ab278548

Anti-Chk2 (phospho T68) antibody [Chk2T68-D12]

Recombinant | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human CHEK2 pT68. The exact immunogen used to generate this antibody is proprietary information. Database link O96017
Clone number	Chk2T68-D12
Purification technique	Affinity purification Protein A/G
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	0.001-1 µg/mL

Notes	-

Species	Rat
Dilution info	0.001-1 µg/mL
Notes	-

Species	Human
Dilution info	0.001-1 µg/mL
Notes	-

WB

Tested

Species	Human
Dilution info	0.001-1 µg/mL
Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information CHEK2 pT68

Function

Serine/threonine-protein kinase which is required for checkpoint-mediated cell cycle arrest, activation of DNA repair and apoptosis in response to the presence of DNA double-strand breaks. May also negatively regulate cell cycle progression during unperturbed cell cycles. Following activation, phosphorylates numerous effectors preferentially at the consensus sequence [L-X-R-X-X-S/T] (PubMed:37943659). Regulates cell cycle checkpoint arrest through phosphorylation of CDC25A, CDC25B and CDC25C, inhibiting their activity. Inhibition of CDC25 phosphatase activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. May also phosphorylate NEK6 which is involved in G2/M cell cycle arrest. Regulates DNA repair through phosphorylation of BRCA2, enhancing the association of RAD51 with chromatin which promotes DNA repair by homologous recombination. Also stimulates the transcription of genes involved in DNA repair (including BRCA2)

through the phosphorylation and activation of the transcription factor FOXM1. Regulates apoptosis through the phosphorylation of p53/TP53, MDM4 and PML. Phosphorylation of p53/TP53 at 'Ser-20' by CHEK2 may alleviate inhibition by MDM2, leading to accumulation of active p53/TP53. Phosphorylation of MDM4 may also reduce degradation of p53/TP53. Also controls the transcription of pro-apoptotic genes through phosphorylation of the transcription factor E2F1. Tumor suppressor, it may also have a DNA damage-independent function in mitotic spindle assembly by phosphorylating BRCA1. Its absence may be a cause of the chromosomal instability observed in some cancer cells. Promotes the CCAR2-SIRT1 association and is required for CCAR2-mediated SIRT1 inhibition (PubMed:25361978). Under oxidative stress, promotes ATG7 ubiquitination by phosphorylating the E3 ubiquitin ligase TRIM32 at 'Ser-55' leading to positive regulation of the autophagosme assembly (PubMed:37943659). (Microbial infection) Phosphorylates herpes simplex virus 1/HHV-1 protein ICP0 and thus activates its SUMO-targeted ubiquitin ligase activity.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

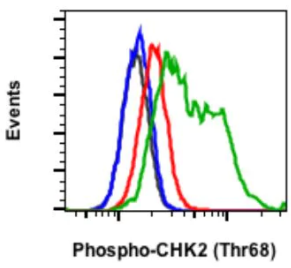
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

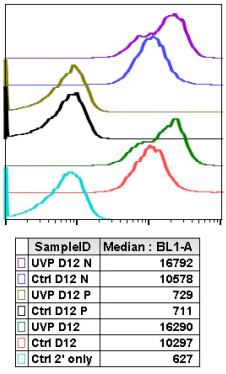
5 product images



Flow Cytometry - Anti-Chk2 (phospho T68) antibody [Chk2T68-D12] (ab278548)

Chk2 (phospho T68) Flow Cytometry staining using rabbit Anti-Chk2 (phospho T68) antibody

Flow cytometric analysis of Hela cells treated with lambda phosphatase (red) or treated with UV+TPA (green) using Pab278548, at 0.01 ug/mL, CHK2T68-D12 #2116, or concentration-matched Rabbit (G9) mAb IgG Isotype Control for cells treated with lambda phosphatase (black) or treated with UV+TPA (blue).

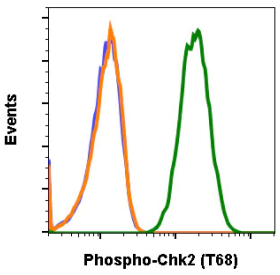


SampleID	Median : BL1-A
UVP D12 N	16792
Ctrl D12 N	10578
UVP D12 P	729
Ctrl D12 P	711
UVP D12	16290
Ctrl D12	10297
Ctrl 2' only	627

Flow Cytometry - Anti-Chk2 (phospho T68) antibody [Chk2T68-D12] (ab278548)

Chk2 (phospho T68) Flow Cytometry staining using rabbit Anti-Chk2 (phospho T68) antibody

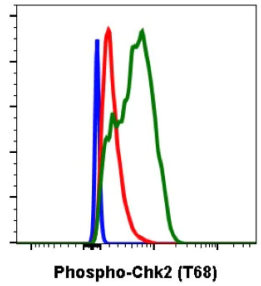
Peptide blocking flow cytometric analysis of HEK293T cells secondary antibody only negative control (light blue) or untreated (red) or UV/TPA-treated (green) or untreated and blocked with phospho-peptide (black) or UV/TPA and blocked with phospho peptide (gold) or untreated and blocked with non-phospho peptide (dark blue) or UV/TPA and blocked with non-phospho peptide (purple) using ab278548 at 0.1µg/mL.



Flow Cytometry - Anti-Chk2 (phospho T68) antibody [Chk2T68-D12] (ab278548)

Chk2 (phospho T68) Flow Cytometry staining using rabbit Anti-Chk2 (phospho T68) antibody

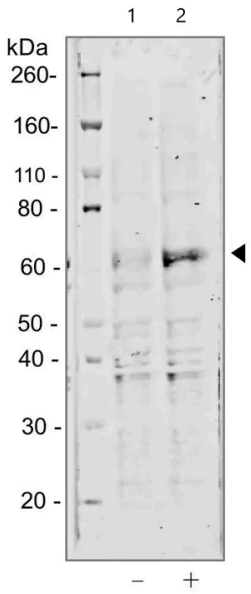
ab278548 recognizes basal phosphorylation levels in mouse cells. Flow cytometric analysis of 3T3 cells secondary antibody only (blue) or 0.1 µg/mL of isotype control (orange) or of ab278548 (green).



Flow Cytometry - Anti-Chk2 (phospho T68) antibody [Chk2T68-D12] (ab278548)

Chk2 (phospho T68) Flow Cytometry staining using rabbit Anti-Chk2 (phospho T68) antibody

Flow cytometric analysis of C6 cells secondary antibody only negative control (blue) or treated with imatinib (red) or with pervanadate (green) using 0.05 µg/mL ab278548.



Western blot - Anti-Chk2 (phospho T68) antibody [Chk2T68-D12] (ab278548)

All lanes:
Western blot - Anti-Chk2 (phospho T68) antibody [Chk2T68-D12] (ab278548) at 1 µg/mL

Lane 1:
HEK-293 (human epithelial cell line from embryonic kidney) untreated, whole cell lysate

Lane 2:
HEK-293 (human epithelial cell line from embryonic kidney) treated with UV, whole cell lysate

Predicted band size: 61 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.