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Product datasheet for TA354333

Chk2 (CHEK2) Mouse Monoclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB 0.1-1 µg/ml ELISA 0.01-0.1 µg/ml IP 2-5 µg/ml IHC 2-10 µg/ml FC 5-10 µg/ml
Reactivity:	Human
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Purified recombinant CHK2 protein.
Formulation:	This affinity purified antibody is supplied in sterile Phosphate buffered saline (pH7.2) containing antibody stabilizer.
Purification:	The mouse IgG is purified by Protein A-Affinity Chromatography according to Isotyping
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	70 kDa
Gene Name:	checkpoint kinase 2
Database Link:	NP_001005735 Entrez Gene 11200 Human O96017

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Background: Cell cycle events are regulated by the sequential activation and deactivation of cyclin dependent kinases (Cdks) and by proteolysis of cyclins. In response to DNA damage and replication blocks, cell cycle progression is halted through the control of critical cell cycle regulators. Both Chk1 and Chk2 contain a forkhead-associated protein interaction domain essential for activation in response to DNA damage and is rapidly phosphorylated in response to replication blocks and DNA damage. When activated, the encoded protein is known to inhibit CDC25C phosphatase, preventing entry into mitosis, and has been shown to stabilize the tumor suppressor protein p53, leading to cell cycle arrest in G1. Cdc25A, Cdc25B and Cdc25C protein tyrosine phosphatases function as mitotic activators by dephosphorylating Cdc2 p34 on regulatory tyrosine residues. Chk1 can phosphorylate Wee1 in vitro, providing evidence that the hyperphosphorylated form of Wee1, seen in cells delayed by Chk1 overexpression, is due to phosphorylation by Chk1. In addition, CHKs interact with and phosphorylates BRCA1, allowing BRCA1 to restore survival after DNA damage. Mutations in CHK2 gene have been linked with Li-Fraumeni syndrome, a highly penetrant familial cancer phenotype usually associated with inherited mutations in TP53. Also, mutations in this gene are thought to confer a predisposition to sarcomas, breast cancer, and brain tumors. This nuclear protein is a member of the CDS1 subfamily of serine/threonine protein kinases. Three transcript variants (a, b, c) encoding different isoforms have been found.

Synonyms: CDS1; CHK2; hCds1; HuCds1; LFS2; PP1425; RAD53

Protein Families: Druggable Genome, Protein Kinase, Stem cell - Pluripotency

Protein Pathways: Cell cycle, p53 signaling pathway

Product images:

WB: The cell lysate derived from HELA was resolved on to 10% SDSPAGE, transferred to NC membrane and immunoprobed by the Ms anti-CHK2 antibody, at 1:500 for 30 min at RT. An immunereactive band is observed around 70 kDa.

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