

Product Datasheet

Phospho-Chk1 (Ser317) rabbit mAb FITC conjugate Antibody (orb1946235)

Catalog Number	orb1946235
Category	Antibodies
Description	<p>The act of DNA damaged response and cell cycle checkpoints requires the activation of four protein kinases that form the canonical ATR-Chk1 and ATM-Chk2 pathways. ATR activation requires the generation of structures containing single strand DNA (ssDNA) adjacent to double strand DNA (dsDNA). Such ssDNA is coated with replication protein A complex and attracts ATR (1,2). The accumulation of ATR to damage sites results in initial activation of ATR. ATR phosphorylates proteins at the ssDNA which are called checkpoint regulators. The accumulation and phosphorylation of these checkpoint regulators further stimulates the catalytic activity of ATR. ATR-induced Chk1 phosphorylation likely occurs at the sites of DNA damage on chromatin (3-5). The activated ATR phosphorylates Chk1 at Ser317 and Ser345 in its C-terminal regulatory domain. Phospho Chk1 is critical for DNA damage checkpoint activation, replication control, and cell viability (6-8). Functionally, ATR-mediated phosphorylation elevates phospho Chk1 catalytic activity. The N-terminal catalytic domain of Chk1 adopts an open kinase conformation and the deletion of C-terminal domain increases Chk1 catalytic activity.</p>
Clonality	Monoclonal
Species/Host	Rabbit
Isotype	Rabbit IgG1k
Conjugation	FITC
Reactivity	Human, Mouse
Form/Appearance	Liquid

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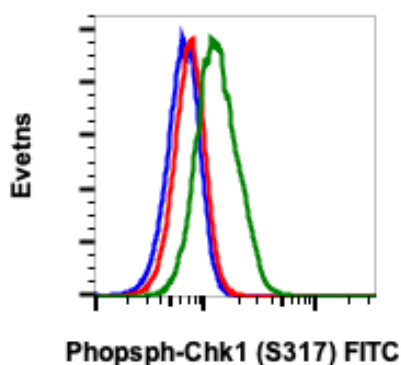
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Buffer/Preservatives	1X PBS, 0.09% NaN ₃ , 0.2% rAlbumin
Purification	Protein A+G
Immunogen	A synthetic phospho-peptide corresponding to residues surrounding Ser317 of human phospho Chk1
UniProt ID	O14757
Tested applications	FC
Dilution range	For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells or 5 µL per 100 µL of staining volume. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.
Cross Reactivity	Predicted to work with mouse, rat and other homologues.
Clone Number	BH32
Storage	2-8°C
Note	For research use only
Expiration Date	12 months from date of receipt.



Flow cytometric analysis of HeLa cells treated with imatinib and unstained as negative control (blue) or treated with imatinib (red) or treated with pervanadate (green) and stained using phospho-Chk1 (S317) antibody Chk1S317-F10 FITC conjugate. Cat. #orb1946235.

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