Phospho-Chk1 (Ser317) (F10) rabbit mAb

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Catalog: #2151

Store at: -20ºC

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Detection	Clonality	Isotype
Flow Cytometry	Anti-Rabbit IgG	Monoclonal	Rabbit IgGk

Format: Unconjugated

Cross Reactivity: Predicted to work with mouse, rat and other homologues.

Formulation: 1X PBS, 0.02% NaN3, 50% Glycerol, 0.1% BSA

Preparation: Protein A+G

Reactivity: Human,Mouse

Recommended Usage: 1µg/mL – 0.001µg/mL. It is recommended that the reagent be titrated for optimal performance for each application. See product image legends for additional information.

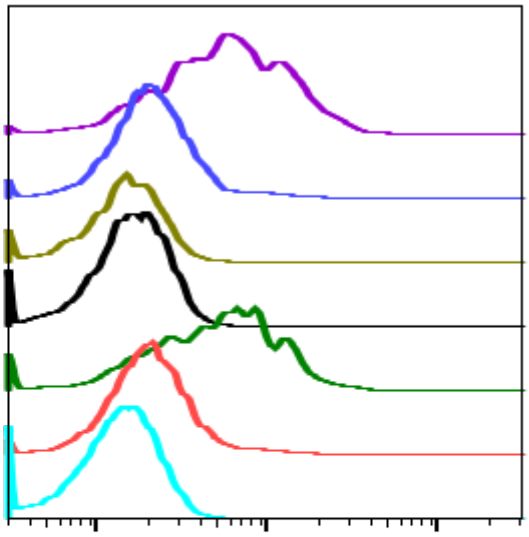
Immunogen: A synthetic phospho-peptide corresponding to residues surrounding Ser317 of human phospho Chk1

Description: 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.

References:

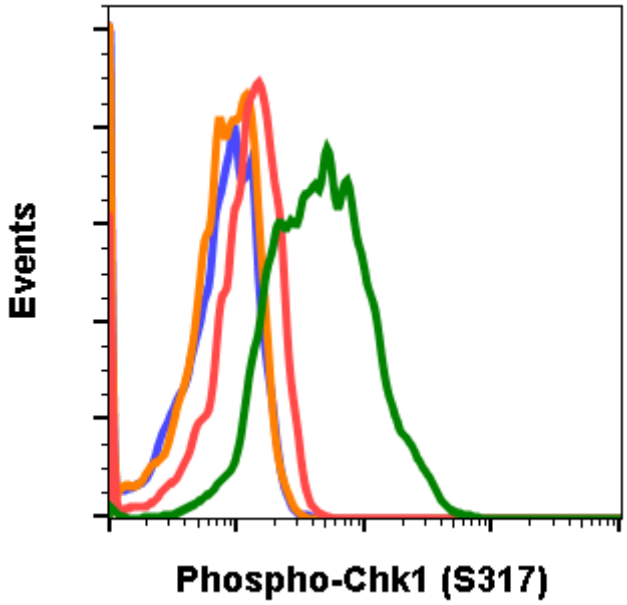
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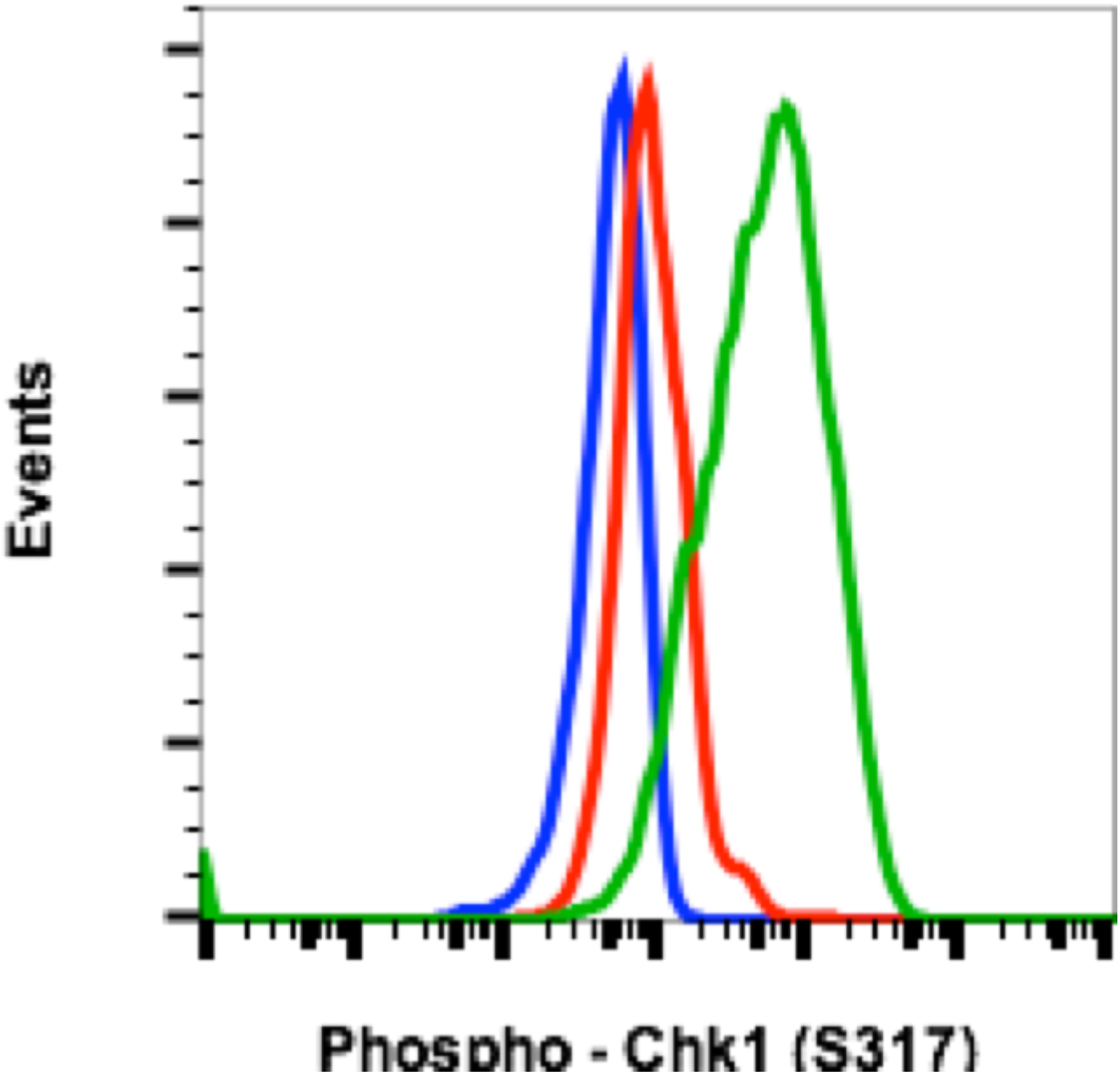


	SampleID	Median : BL1-A
	IFN F10 N	5661
	Ctrl F10 N	2010
	IFN F10 P	1461
	Ctrl F10 P	1582
	IFN F10	5160
	Ctrl F10	1963
	Ctrl 2' only	1355

Peptide blocking flow cytometric analysis of NIH3T3 cells secondary antibody only negative control (light blue) or untreated (red) or treated with IFNα + IL4 + pervanadate (green) or untreated and blocked with phospho-peptide (black) or treated and blocked with phospho peptide (gold) or untreated and blocked with non-phospho peptide (dark blue) or treated and blocked with non-phospho peptide (purple) using Phospho-Chk1 (S317) antibody Chk1S317-F10 0.1 µg/mL. Cat. #2151.



Flow cytometric analysis of NIH3T3 cells secondary antibody only negative control (blue) or 0.1 µg/mL of isotype control Cat. #2141 (orange) or treated with imatinib (red) or with pervanadate (green) using Phospho-Chk1 (S317) antibody Chk1S317-F10 at 0.1 µg/mL. Cat #2151.



Flow cytometric analysis of Hela cells secondary antibody only negative control (blue) or treated imatinib (red) or treated with pervanadate (green) using Phospho-Chk1 (S317) antibody Chk1S317-F10 0.1 µg/mL. Cat. #2151.