

Immunotag™ Phospho-Chk1 (Ser345) Antibody

Antibody Specification	
Catalog No.	ITA0780
Product Description	Immunotag™ Phospho-Chk1 (Ser345) Antibody
Size	100 µg, 200 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	Phospho-Chk1 (Ser345)
Clonality	Polyclonal
Storage/Stability	-20°C/1 year
Application	IHC,IF/ICC,ELISA
Recommended Dilution	IHC 1:50-1:200, IF/ICC 1:100-1:500
Concentration	1 mg/ml
Reactive Species	Human,Mouse,Rat
Host Species	Rabbit
Immunogen	A synthesized peptide derived from human Chk1 around the phosphorylation site of Serine 345
Specificity	Phospho-Chk1 (Ser345) Antibody detects endogenous levels of Chk1 only when phosphorylated at Serine 345
Purification	The antibody is from purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.Store at -20 °C.Stable for 12 months from date of receipt
Gene Name	CHEK1
Accession No.	O14757

Antibody Specification

Alternate Names	C85740; Cell cycle checkpoint kinase; Checkpoint , <i>S. pombe</i> , homolog of, 1; Checkpoint kinase 1; Checkpoint kinase 1 homolog (<i>S. pombe</i>); CHEK 1; Chk1; Chk 1; Chk1; CHK1 checkpoint homolog (<i>S. pombe</i>); CHK1_HUMAN; EC 2.7.11.1; rad27; Serine/threonine protein kinase Chk1; Serine/threonine-protein kinase CHK1; STT3, subunit of the oligosaccharyltransferase complex, homolog A (<i>S. cerevisiae</i>);
Description	Serine/threonine-protein kinase which is required for checkpoint-mediated cell cycle arrest and activation of DNA repair in response to the presence of DNA damage or unreplicated DNA. May also negatively regulate cell cycle progression during unperturbed cell cycles. This regulation is achieved by a number of mechanisms that together help to preserve the integrity of the genome. Recognizes the substrate consensus sequence [R-X-X-S/T]. Binds to and phosphorylates CDC25A, CDC25B and CDC25C. Phosphorylation of CDC25A at 'Ser-178' and 'Thr-507' and phosphorylation of CDC25C at 'Ser-216' creates binding sites for 14-3-3 proteins which inhibit CDC25A and CDC25C. Phosphorylation of CDC25A at 'Ser-76', 'Ser-124', 'Ser-178', 'Ser-279' and 'Ser-293' promotes proteolysis of CDC25A. Phosphorylation of CDC25A at 'Ser-76' primes the protein for subsequent phosphorylation at 'Ser-79', 'Ser-82' and 'Ser-88' by NEK11, which is required for polyubiquitination and degradation of CDC25A. Inhibition of CDC25 leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. Also phosphorylates NEK6. Binds to and phosphorylates RAD51 at 'Thr-309', which promotes the release of RAD51 from BRCA2 and enhances the association of RAD51 with chromatin, thereby promoting DNA repair by homologous recombination. Phosphorylates multiple sites within the C-terminus of TP53, which promotes activation of TP53 by acetylation and promotes cell cycle arrest and suppression of cellular proliferation. Also promotes repair of DNA cross-links through phosphorylation of FANCE. Binds to and phosphorylates TLK1 at 'Ser-743', which prevents the TLK1-dependent phosphorylation of the chromatin assembly factor ASF1A. This may enhance chromatin assembly both in the presence or absence of DNA damage. May also play a role in replication fork maintenance through regulation of PCNA. May regulate the transcription of genes that regulate cell-cycle progression through the phosphorylation of histones. Phosphorylates histone H3.1 (to form H3T11ph), which leads to epigenetic inhibition of a subset of genes. May also phosphorylate RB1 to promote its interaction with the E2F family of transcription factors and subsequent cell cycle arrest.
Cell Pathway/ Category	Primary Polyclonal Antibody
Protein MW	kDa
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.