



Rabbit Anti-phospho-MDC1 (Ser964) antibody

SL18741R

Product Name:	phospho-MDC1 (Ser964)
Chinese Name:	磷酸化DNA损伤关卡蛋白1抗体
Alias:	MDC1 (phospho S964); p-MDC1 (phospho S964); DKFZp781A0122; Homologue to Drosophila photoreceptor protein calphotin; KIAA0170; KIAA0170; MDC 1; Mdc1; MDC1_HUMAN; Mediation of DNA damage checkpoint 1; Mediator of DNA damage checkpoint 1; Mediator of DNA Damage Checkpoint Protein 1; Mediator of DNA Damage Checkpoint Protein 1; NFBD 1; NFBD1; NFBD1; Nuclear factor with BRCT domains 1; Nuclear Factor with BRCT Domains Protein 1; Nuclear Factor with BRCT Domains Protein 1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	227kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthesised phosphopeptide derived from human MDC1 around the phosphorylation site of Ser964:AS(p-S)PT
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

PubMed:

[PubMed](#)

The protein encoded by this gene contains an N-terminal forkhead domain, two BRCA1 C-terminal (BRCT) motifs and a central domain with 13 repetitions of an approximately 41-amino acid sequence. The encoded protein is required to activate the intra-S phase and G2/M phase cell cycle checkpoints in response to DNA damage. This nuclear protein interacts with phosphorylated histone H2AX near sites of DNA double-strand breaks through its BRCT motifs, and facilitates recruitment of the ATM kinase and meiotic recombination 11 protein complex to DNA damage foci. [provided by RefSeq, Jul 2008]

Function:

Required for checkpoint mediated cell cycle arrest in response to DNA damage within both the S phase and G2/M phases of the cell cycle. May serve as a scaffold for the recruitment of DNA repair and signal transduction proteins to discrete foci of DNA damage marked by 'Ser-139' phosphorylation of histone H2AFX. Also required for downstream events subsequent to the recruitment of these proteins. These include phosphorylation and activation of the ATM, CHEK1/CHK1 and CHEK2/CHK2/CDS1 kinases, and stabilization of TP53 and apoptosis. ATM and CHEK2 may also be activated independently by a parallel pathway mediated by TP53BP1.

Subcellular Location:

Nucleus. Associated with chromatin. Relocalizes to discrete nuclear foci following DNA damage, this requires 'Ser-139' phosphorylation of H2AFX. Colocalizes with APTX at sites of DNA double-strand breaks.

Tissue Specificity:

Highly expressed in testis.

Post-translational modifications:

Phosphorylated upon exposure to ionizing radiation (IR), ultraviolet radiation (UV), and hydroxyurea (HU). Phosphorylation in response to IR requires ATM, NBN, and possibly CHEK2. Also phosphorylated during the G2/M phase of the cell cycle and during activation of the mitotic spindle checkpoint.

Similarity:

Contains 2 BRCT domains.
Contains 1 FHA domain.

SWISS:

Q14676

Gene ID:

9656

Database links:

Product Detail:

[Entrez Gene: 9656](#) Human

[GenBank: NP_055456](#) Human

[Oimim: 607593](#) Human

[SwissProt: Q14676](#) Human

[Unigene: 433653](#) Human

[Unigene: 653495](#) Human

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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