

**MDC1 (phospho Ser513) Polyclonal Antibody**

<b>Catalog No :</b>	YP1100
<b>Reactivity :</b>	Human;Rat;Mouse;
<b>Applications :</b>	IHC;IF;ELISA
<b>Target :</b>	MDC1
<b>Gene Name :</b>	MDC1
<b>Protein Name :</b>	Mediator of DNA damage checkpoint protein 1
<b>Human Gene Id :</b>	9656
<b>Human Swiss Prot No :</b>	Q14676
<b>Mouse Swiss Prot No :</b>	Q5PSV9
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human MDC1 around the phosphorylation site of Ser513. AA range:479-528
<b>Specificity :</b>	Phospho-MDC1 (S513) Polyclonal Antibody detects endogenous levels of MDC1 protein only when phosphorylated at S513.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IHC 1:100 - 1:300. ELISA: 1:5000.. IF 1:50-200
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Molecularweight :</b>	227kD

**Background :**

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 :**

domain:Tandemly repeated BRCT domains are characteristic of proteins involved in DNA damage signaling. In MDC1, these repeats are required for localization to chromatin which flanks sites of DNA damage marked by 'Ser-139' phosphorylation of H2AFX.,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.,PTM:Phosphoryla

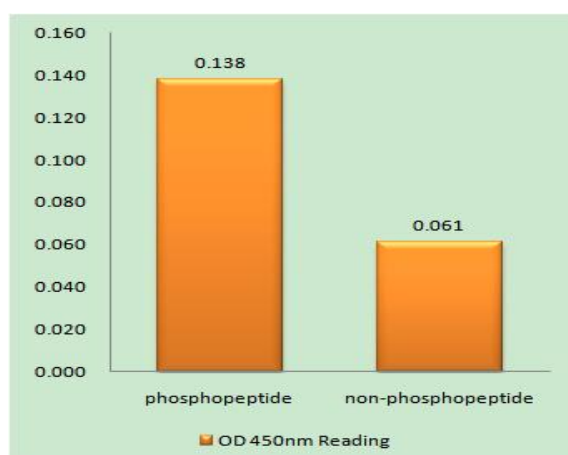
**Subcellular Location :**

Nucleus . Chromosome . Associated with chromatin. Relocalizes to discrete nuclear foci following DNA damage, this requires 'Ser-139' phosphorylation of H2AX. Colocalizes with APTX at sites of DNA double-strand breaks.

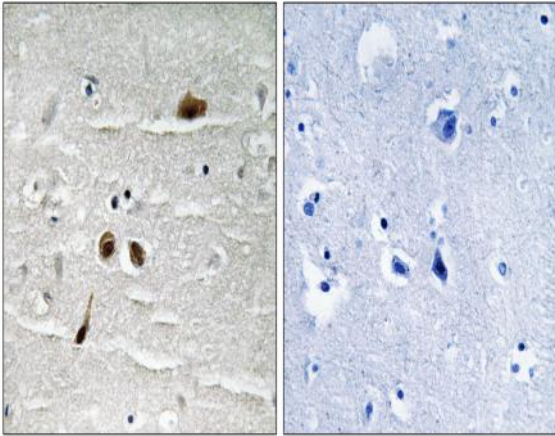
**Expression :**

Highly expressed in testis.

## Products Images



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using MDC1 (Phospho-Ser513) Antibody



Immunohistochemistry analysis of paraffin-embedded human brain, using MDC1 (Phospho-Ser513) Antibody. The picture on the right is blocked with the phospho peptide.