

Rad17 (phospho Ser645) Polyclonal Antibody

Catalog No :	YP0291
Reactivity :	Human;Mouse
Applications :	WB;ELISA;IHC
Target :	Rad17
Gene Name :	RAD17
Protein Name :	Cell cycle checkpoint protein RAD17
Human Gene Id :	5884
Human Swiss Prot No :	O75943
Mouse Gene Id :	19356
Mouse Swiss Prot No :	Q6NXW6
Immunogen :	The antiserum was produced against synthesized peptide derived from human RAD17 around the phosphorylation site of Ser645. AA range:621-670
Specificity :	Phospho-Rad17 (S645) Polyclonal Antibody detects endogenous levels of Rad17 protein only when phosphorylated at S645.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500-2000;IHC 1:50-300; ELISA 2000-20000
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)

Observed Band : 77kD

Background :

The protein encoded by this gene is highly similar to the gene product of *Schizosaccharomyces pombe rad17*, a cell cycle checkpoint gene required for cell cycle arrest and DNA damage repair in response to DNA damage. This protein shares strong similarity with DNA replication factor C (RFC), and can form a complex with RFCs. This protein binds to chromatin prior to DNA damage and is phosphorylated by the checkpoint kinase ATR following damage. This protein recruits the RAD1-RAD9-HUS1 checkpoint protein complex onto chromatin after DNA damage, which may be required for its phosphorylation. The phosphorylation of this protein is required for the DNA-damage-induced cell cycle G2 arrest, and is thought to be a critical early event during checkpoint signaling in DNA-damaged cells. Multiple alternatively spliced transcript variants of this gene, which encode four distinct protein isoforms, h

Function :

function:Essential for sustained cell growth, maintenance of chromosomal stability, and ATR-dependent checkpoint activation upon DNA damage. Has a weak ATPase activity required for binding to chromatin. Participates in the recruitment of the RAD1-RAD9-HUS1 complex onto chromatin, and in CHEK1 activation. May also serve as a sensor of DNA replication progression, and may be involved in homologous recombination.,induction:By X-ray irradiation (isoform 1, isoform 3 and isoform 4).,PTM:Phosphorylated. Phosphorylation on Ser-646 and Ser-656 is cell cycle-regulated, enhanced by genotoxic stress, and required for activation of checkpoint signaling. Phosphorylation is mediated by ATR upon UV or replication arrest, whereas it may be mediated both by ATR and ATM upon ionizing radiation. Phosphorylation on both sites is required for interaction with RAD1 but dispensable for interaction with RFC3 or

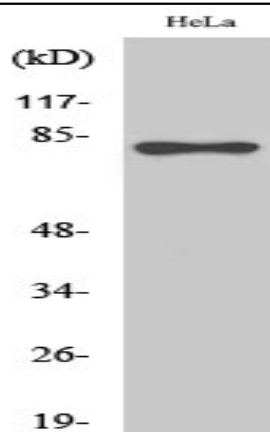
Subcellular Location :

Nucleus . Phosphorylated form redistributes to discrete nuclear foci upon DNA damage.

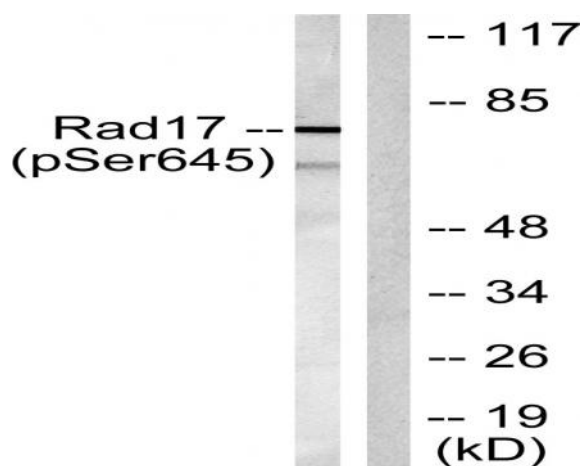
Expression :

Overexpressed in various cancer cell lines and in colon carcinoma (at protein level). Isoform 2 and isoform 3 are the most abundant isoforms in non irradiated cells (at protein level). Ubiquitous at low levels. Highly expressed in testis, where it is expressed within the germinal epithelium of the seminiferous tubuli. Weakly expressed in seminomas (testicular tumors).

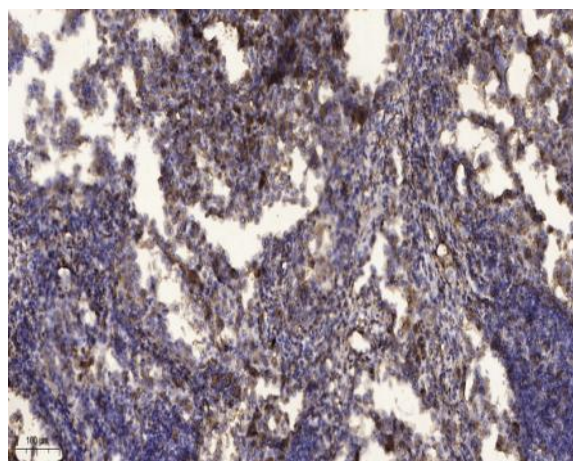
Products Images



Western Blot analysis of various cells using Phospho-Rad17 (S645) Polyclonal Antibody



Western blot analysis of lysates from HeLa cells treated with UV 15', using RAD17 (Phospho-Ser645) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded human Squamous cell carcinoma of lung. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).