

SMC1A monoclonal antibody

Catalog: MB66490

Host: Mouse

Reactivity: Human

BackGround:

Structural maintenance of chromosomes 1 (SMC1) protein is a chromosomal protein member of the cohesin complex that enables sister chromatid cohesion and plays a role in DNA repair. ATM/NBS1-dependent phosphorylation of SMC1 occurs at Ser957 and Ser966 in response to ionizing radiation (IR) as part of the intra-S-phase DNA damage checkpoint. SMC1 phosphorylation is ATM-independent in cells subjected to other forms of DNA damage, including UV light and hydroxyurea treatment. While phosphorylation of SMC1 is required for activation of the IR-induced intra-S-phase checkpoint, the precise mechanism is not well understood and may involve a conformational change that affects SMC1-SMC3 interaction.

The serine residue at 360 of SMC1 is phosphorylated in an ATM/ATR-dependent manner in response to DNA damage. Phospho-SMC1 (Ser360) Antibody is directed at a site that was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for modification site discovery. Phosphorylation at Ser360 was discovered using an ATM/ATR substrate antibody and was shown to be induced by UV treatment. Please visit PhosphoSitePlus®, CST's modification site knowledgebase, at www.phosphosite.org for more information.

Product:

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Molecular Weight:

~ 145 kDa

Swiss-Prot:

Q14683

Purification&Purity:

The antibody was purified by immunogen affinity chromatography.

Applications:

WB (1/500 - 1/1000), IF/ICC (1/50 - 1/100)

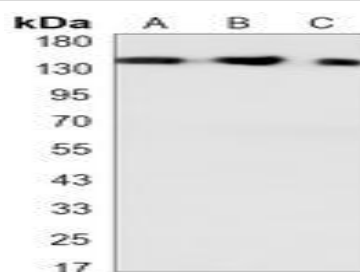
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

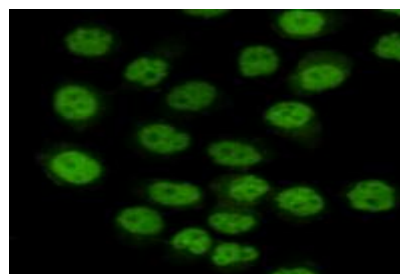
Specificity:

Recognizes endogenous levels of SMC1A protein.

DATA:



Western blot analysis of SMC1A expression in Molt4 (A), U87MG (B), HeLa (C) whole cell lysates.



Immunofluorescent analysis of SMC1A staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark.

Note:

For research use only, not for use in diagnostic procedure.

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