

Store at  
-20C  
#58052**Phospho-SMC1 (Ser957) (D7S8Y) Rabbit mAb****Orders:** 877-616-CELL (2355)  
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<b>Applications:</b> W, IF-IC	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 145	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #Q14683	<b>Entrez-Gene Id:</b> 8243
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**Product Usage Information****Application**Western Blotting  
Immunofluorescence (Immunocytochemistry)**Dilution**1:1000  
1:100**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Phospho-SMC1 (Ser957) (D7S8Y) Rabbit mAb recognizes endogenous levels of SMC1 protein only when phosphorylated at Ser957.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser957 of human SMC1 protein.

**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 (1,2). 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 (3). SMC1 phosphorylation is ATM-independent in cells subjected to other forms of DNA damage, including UV light and hydroxyurea treatment (4). 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 (3).

**Background References**

1. Michaelis, C. et al. (1997) *Cell* 91, 35-45.
2. Sjögren, C. and Nasmyth, K. (2001) *Curr Biol* 11, 991-5.
3. Yazdi, P.T. et al. (2002) *Genes Dev* 16, 571-82.
4. Kim, S.T. et al. (2002) *Genes Dev* 16, 560-70.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer****IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.**Applications Key****W:** Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)**Cross-Reactivity Key****H:** Human **M:** Mouse**Trademarks and Patents**

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