

**Phospho-Lamin A/C (Ser22) (D2B2E)
Rabbit mAb****Orders:** 877-616-CELL (2355)
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	69,78	Rabbit IgG	#P02545	4000

Product Usage Information**Application**Western Blotting
Immunoprecipitation**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-Lamin A/C (Ser22) (D2B2E) Rabbit mAb recognizes endogenous levels of lamin A/C protein only when phosphorylated at Ser22.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser22 of human lamin A/C protein.

Background

Lamins are nuclear membrane structural components that are important in maintaining normal cell functions such as cell cycle control, DNA replication, and chromatin organization (1-3). Lamin A/C is cleaved by caspase-6 and serves as a marker for caspase-6 activation. During apoptosis, lamin A/C is specifically cleaved into a large (41-50 kDa) and a small (28 kDa) fragment (3,4). The cleavage of lamins results in nuclear dysregulation and cell death (5,6). Phosphorylation of lamin A/C at Ser22 was identified *in vivo* in several cell lines by mass spectrometry analysis in proteomic screens. The surrounding sequence is a typical MAPK/CDK phosphorylation motif, which implicates a role in the cell cycle and mitosis (7-11).

Background References

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2. Yabuki, M. et al. (1999) *Physiol Chem Phys Med NMR* 31, 77-84.
3. Goldberg, M. et al. (1999) *Crit Rev Eukaryot Gene Expr* 9, 285-93.
4. Orth, K. et al. (1996) *J Biol Chem* 271, 16443-6.
5. Oberhammer, F.A. et al. (1994) *J Cell Biol* 126, 827-37.
6. Rao, L. et al. (1996) *J Cell Biol* 135, 1441-55.
7. Lowery, D.M. et al. (2007) *EMBO J* 26, 2262-73.
8. Molina, H. et al. (2007) *Proc Natl Acad Sci U S A* 104, 2199-204.
9. Beausoleil, S.A. et al. (2006) *Nat Biotechnol* 24, 1285-92.
10. Nousiainen, M. et al. (2006) *Proc Natl Acad Sci U S A* 103, 5391-6.
11. Beausoleil, S.A. et al. (2004) *Proc Natl Acad Sci U S A* 101, 12130-5.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key**W:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key****H:** Human **M:** Mouse **R:** Rat**Trademarks and Patents**

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