

#12586 Store at -20°C

## Lamin B1 (D4Q4Z) Rabbit mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	68, 25	Rabbit IgG	#P20700	4001

### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### 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

Lamin B1 (D4Q4Z) Rabbit mAb recognizes endogenous levels of total lamin B1 protein. This antibody recognizes the 25 kDa lamin B1 amino terminal cleavage product produced during apoptosis.

### Species predicted to react based on 100% sequence homology:

Monkey, Pig

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu118 of human lamin B1 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). Lamins have been subdivided into types A and B. Type-A lamins consist of lamin A and C, which arise from alternative splicing of the lamin A gene *LMNA*. Lamin A and C are cleaved by caspases into large (41-50 kDa) and small (28 kDa) fragments, which can be used as markers for apoptosis (4,5). Type-B lamins consist of lamin B1 and B2, encoded by separate genes (6-8). Lamin B1 is also cleaved by caspases during apoptosis (9). Research studies have shown that duplication of the lamin B1 gene *LMNB1* is correlated with pathogenesis of the neurological disorder adult-onset leukodystrophy (10).

### Background References

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2. Goldberg, M. et al. (1999) *Crit Rev Eukaryot Gene Expr* 9, 285-93.
3. Yabuki, M. et al. (1999) *Physiol Chem Phys Med NMR* 31, 77-84.
4. Rao, L. et al. (1996) *J Cell Biol* 135, 1441-55.
5. Orth, K. et al. (1996) *J Biol Chem* 271, 16443-6.
6. Biamonti, G. et al. (1992) *Mol Cell Biol* 12, 3499-506.
7. Lin, F. and Worman, H.J. (1995) *Genomics* 27, 230-6.
8. Pollard, K.M. et al. (1990) *Mol Cell Biol* 10, 2164-75.
9. Chandler, J.M. et al. (1997) *Biochem J* 322 ( Pt 1), 19-23.
10. Padiath, Q.S. et al. (2006) *Nat Genet* 38, 1114-23.

### 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

**WB:** Western Blotting

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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