

100 µl  
 (10 western blots)

rev. 03/31/10

This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

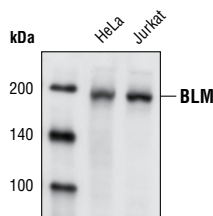
**Entrez-Gene ID** #641  
**Swiss-Prot Acc.** #P54132

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W	H	190 kDa	Rabbit**
Endogenous			

**Background:** BLM, a member of the RecQ family of DNA helicases, is part of the BRCA1-associated genome surveillance complex (BASC) that responds to DNA damage, stalled replication forks and S phase arrest (1-4). Phosphorylation of BLM helicase at Thr99 and Thr122 occurs in response to genotoxic stress (4), and phosphorylation of Ser144 appears to be important in regulating chromosome stability during mitosis (5). Typical BLM protein resides in the nucleus and forms part of a dynamic protein complex that acts in response to DNA damage during specific periods of the cell cycle (6). Although RecQ helicases are rarely considered as essential enzymes, they function at the interface between DNA recombination and repair and are required for global genome stability maintenance. Mutations in BLM helicase are responsible for development of Bloom Syndrome, a recessive genetic disorder clinically characterized by short stature, immunodeficiency and elevated risk of malignancy (7). Similar alterations to genes encoding the related RecQ helicases RecQ4 and WRN also result in recessive genetic disorders associated with genomic instability (8,9). Cells from Bloom Syndrome patients exhibit genomic instability and increased frequency of sister chromatid exchange (10).

**Specificity/Sensitivity:** BLM Antibody detects endogenous levels of total BLM protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human BLM. Antibodies are purified by peptide affinity chromatography.



Western blot analysis of extracts from HeLa and Jurkat cells using BLM Antibody.

**Background References:**

- (1) Wang, Y. et al. (2000) *Genes Dev.* 14, 927-939.
- (2) Langland, G. et al. (2002) *Cancer Res.* 62, 2766-2770.
- (3) Sengupta, S. et al. (2003) *EMBO J.* 22, 1210-1222.
- (4) Davies, S.L. et al. (2004) *Mol. Cell. Biol.* 24, 1279-1291.
- (5) Leng, M. et al. (2006) *Proc. Natl. Acad. Sci. USA* 103, 11485-11490.
- (6) Bischof, O. et al. (2001) *J. Cell Biol.* 153, 367-380.
- (7) van Brabant, A.J. et al. (2000) *Annu. Rev. Genomics Hum. Genet.* 1, 409-459.
- (8) Kitao, S. et al. (1999) *Nat. Genet.* 22, 82-84.
- (9) Yu, C.E. et al. (1996) *Science* 272, 258-262.
- (10) Chaganti, R.S. et al. (1974) *Proc. Natl. Acad. Sci. USA* 71, 4508-4512.

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

**\*Species cross-reactivity is determined by western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

**Recommended Antibody Dilutions:**

Western blotting 1:1000

**For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).**

**Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.**

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.**