

BLM (H-300): sc-14018

BACKGROUND

Bloom's syndrome is an autosomal recessive disorder characterized by pre- and post-natal growth deficiencies, sun sensitivity, immunodeficiency and a predisposition to various cancers. The gene responsible for Bloom's syndrome, BLM, encodes a protein homologous to the RecQ helicase of *E. coli* and is mutated in most Bloom's syndrome patients. One characteristic of Bloom's syndrome is an increased frequency of sister chromatid exchange (SCE). BLM has been shown to unwind G4 DNA, and a failure of this function is thought to be responsible for the increased rate of SCE. BLM is known to be translocated to the nucleus, where its ATPase activity is stimulated by both single and double-stranded DNA. Mutations in the yeast SGS1, a homolog of BLM, are known to cause mitotic hyperrecombination similar to that observed in Bloom's cells.

CHROMOSOMAL LOCATION

Genetic locus: BLM (human) mapping to 15q26.1; Blm (mouse) mapping to 7 D3.

SOURCE

BLM (H-300) is a rabbit polyclonal antibody raised against amino acids 1118-1417 of BLM of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

BLM (H-300) is recommended for detection of BLM of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BLM (H-300) is also recommended for detection of BLM in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for BLM siRNA (h): sc-29808, BLM siRNA (m): sc-29809, BLM shRNA Plasmid (h): sc-29808-SH, BLM shRNA Plasmid (m): sc-29809-SH, BLM shRNA (h) Lentiviral Particles: sc-29808-V and BLM shRNA (m) Lentiviral Particles: sc-29809-V.

Molecular Weight of BLM: 180 kDa.

Positive Controls: K-562 nuclear extract: sc-2130.

RESEARCH USE

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

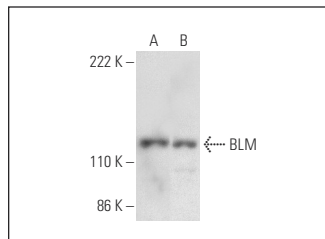
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

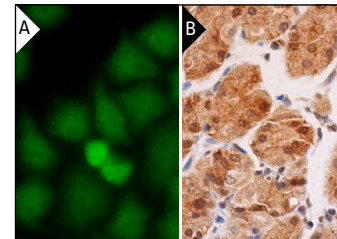
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



BLM (H-300): sc-14018. Western blot analysis of BLM expression in K-562 (A) and HeLa (B) nuclear extracts.



BLM (H-300): sc-14018. Immunofluorescence staining of formalin-fixed HeLa cells showing nuclear localization. Kindly provided by Yang Xiang, Ph.D., Division of Newborn Medicine, Boston Children's Hospital, Cell Biology Department, Harvard Medical School (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing nuclear and cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Pichierri, P., et al. 2004. BLM and the FANCD proteins collaborate in a common pathway in response to stalled replication forks. *EMBO J.* 23: 3154-3163.
- Taylor, T.J., et al. 2004. Proteomics of herpes simplex virus replication compartments: association of cellular DNA replication, repair, recombination, and chromatin remodeling proteins with ICP8. *J. Virol.* 78: 5856-5866.
- Luciani, J.J., et al. 2006. PML nuclear bodies are highly organised DNA-protein structures with a function in heterochromatin remodelling at the G₂ phase. *J. Cell Sci.* 119: 2518-2531.
- Metzler-Guillemain, C., et al. 2008. In human pachytene spermatocytes, SUMO protein is restricted to the constitutive heterochromatin. *Chromosome Res.* 16: 761-782.
- Lee, S.J., et al. 2010. Estrogen prevents senescence through induction of WRN, Werner syndrome protein. *Horm. Res. Paediatr.* 74: 33-40.

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Try **BLM (B-4): sc-365753** or **BLM (C-1): sc-376237**, our highly recommended monoclonal alternatives to BLM (H-300).