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[Marker Primary Antibody]

Rabbit Anti-BLM/FITC Conjugated antibody

Catalog Number: SL12872R-FITC

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-BLM/FITC
Immunogen:	KLH conjugated synthetic peptide derived from human BLM/Blooms Syndrome Protein Blm
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	ICC/IF=1:50-200 IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	(predicted:Human,Mouse,Rat,Dog,Pig,Cow,Horse,Sheep)
Background:	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 similiar to that observed in Bloom's cells. **Function:** Participates in DNA replication and repair. Exhibits a magnesium-

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	dependent ATP-dependent DNA-helicase activity that unwinds single- and double-stranded DNA in a 3'-5' direction. **Subunit:** Part of the BRCA1-associated genome surveillance complex(BASC), which contains BRCA1, MSH2, MSH6, MLH1, ATM, BLM, PMS2 andthe RAD50-MRE11-NBS1 protein complex. This association could be adynamic process changing throughout the cell cycle and withinsubnuclear domains. Interacts with ubiquitinated FANCD2. Interactswith RMI complex. Interacts directly with RMI1 component of RMIcomplex. Interacts with SUPV3L1. **Subcellular Location:** Nucleus. **Post-translational modifications:** Phosphorylated in response to DNA damage. Phosphorylation requires the FANCA-FANCC-FANCE-FANCF-FANCG protein complex, as well as the presence of RMI1. DISEASE: Defects in BLM are the cause of Bloom syndrome (BLM) [MIM:210900]. BLM is an autosomal recessive disorder characterized by proportionate pre- and postnatal growth deficiency, sun-sensitive telangiectatic hypo- and hyperpigmented skin, predisposition to malignancy, and chromosomal instability. **Similarity:** Belongs to the helicase family. RecQ subfamily. Contains 1 helicase ATP-binding domain. Contains 1 helicase C-terminal domain. Contains 1 HRDC domain. **Database links:** **Entrez Gene:** 641 Human **Entrez Gene:** 12144 Mouse Omim: 604610 Human **SwissProt:** P54132 Human **SwissProt:** O88700 Mouse **Unigene:** 725208 Human **Unigene:** 12932 Mouse Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.