BLM Protein, Mouse (His-Myc)

Cat. No.:	HY-P72105
Synonyms:	BlmBloom syndrome protein homolog; mBLM; EC 3.6.4.12; RecQ helicase homolog
Species:	Mouse
Source:	E. coli
Accession:	O88700 (I684-Q859)
Gene ID:	12144
Molecular Weight:	Approximately 24.7 kDa

PROPERTIES

AA Sequence	I N A A L L G E D C F I L M P T G G G K S L C Y Q L P A C V S P G V T I V I S P L R S L I V D Q V Q K L T S F D I P A T Y L T G D K T D S E A A N I Y L Q L S K K D P I I K L L Y V T P E K V C A S N R L I S T L E N L Y E R K L L A R F V I D E A H C V S Q W G H D F R Q D Y K R M N M L R Q K F P S V P V M A L T A T A N P R V Q K D I L T Q L K I L R P Q
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm solution of Tris-based buffer, 50% Glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	BLM, an ATP-dependent DNA helicase, plays a pivotal role in unwinding both single- and double-stranded DNA in a 3'-5' direction. It actively participates in DNA replication and repair processes, contributing to the intricate molecular machinery involved in these essential cellular functions (By similarity). Notably, BLM is a key player in the 5'-end resection of DNA during double-strand break (DSB) repair, where it unwinds DNA and recruits DNA2, which mediates the cleavage of 5'-ssDNA. Additionally, BLM exhibits a negative regulatory role in sister chromatid exchange (SCE) . It demonstrates a capacity to stimulate DNA 4-way junction branch migration and DNA Holliday junction dissolution and displays binding affinity for

single-stranded DNA (ssDNA), forked duplex DNA, and DNA Holliday junctions (By similarity). The orchestrated recruitment of BLM to DNA replication forks by the KHDC3-OOEP scaffold, coupled with TRIM25 ubiquitination, underscores its involvement in promoting the restart of stalled replication forks.

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