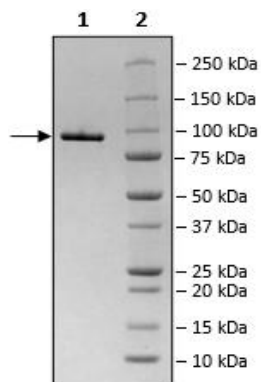


## Product Information

<b>Description:</b>	Recombinant human BLM (Bloom syndrome protein, also known as BLM RecQ like helicase), encompassing amino acids 630-1300. This construct contains a N-terminal GST-tag followed by a thrombin cleavage site. This protein was affinity purified.
<b>Background:</b>	The BLM helicase, also known as Bloom syndrome protein, is a key enzyme involved in DNA replication and repair (DDR). The BLM helicase is a member of the RecQ family of helicases, which are evolutionarily conserved and found in many organisms, including bacteria, yeast, and humans. It catalyzes the unwinding of duplex DNA with 3' to 5' directionality, driven by the energy generated from ATP hydrolysis. BLM plays a crucial role in maintaining genomic stability by unwinding DNA structures during processes such as DNA replication, recombination, and repair. Mutations in the BLM gene can lead to Bloom syndrome, a rare genetic disorder characterized by growth deficiency, sun-sensitive skin lesions, and an increased risk of cancer. High expression of BLM is found in glioblastoma, and it was found that inhibition of its activity leads to increased susceptibility to treatment with drugs targeting other proteins involved in DDR, such as PARP1 (poly-ADP ribosylation protein 1). The use of BLM inhibitors as part of a combinatory therapeutic approach may open new avenues of treatment in cancer therapy.
<b>Species:</b>	Human
<b>Construct:</b>	BLM (GST-Th-630-1300)
<b>Concentration:</b>	0.64 mg/ml
<b>Expression System:</b>	Sf9
<b>Purity:</b>	≥90%
<b>Format:</b>	Aqueous buffer solution.
<b>Formulated In:</b>	40 mM Tris-HCl, pH 8.0, 200 mM NaCl, 2.2 mM KCl, 0.04% Tween-20, 20% glycerol, and 1 mM TCEP
<b>MW:</b>	102 kDa
<b>Genbank Accession:</b>	NM_000057.4
<b>Stability:</b>	At least 6 months at -80°C.
<b>Storage:</b>	-80°C
<b>Instructions for Use:</b>	Thaw on ice and gently mix prior to use. DO NOT VORTEX. Perform a quick spin before opening. Aliquot into small volumes and flash freeze for long term storage. Avoid multiple freeze/thaw cycles.
<b>Assay Conditions:</b>	BLM, GST-Tag Recombinant at different amounts was incubated with 5 µl of the substrate mix (DNA substrate and ATP, 150 nM, and 2 mM, respectively). Fluorescence was recorded in a kinetic mode ( $\lambda_{exc}=544$ nm, $\lambda_{em}=590$ nm).
<b>Applications:</b>	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.

## Quality Control Data

### 4-20% SDS-PAGE Coomassie Staining



### BLM Activity

