

## LacI Protein, E.coli (His-SUMO)

Cat. No.:	HY-P71519
Synonyms:	lacI; b0345; JW0336; Lactose operon repressor
Species:	E.coli
Source:	E. coli
Accession:	P03023 (1M-360Q)
Gene ID:	945007
Molecular Weight:	Approximately 54.6 kDa

### PROPERTIES

AA Sequence	<pre> M K P V T L Y D V A   E Y A G V S Y Q T V   S R V V N Q A S H V   S A K T R E K V E A A M A E L N Y I P N   R V A Q Q L A G K Q   S L L I G V A T S S   L A L H A P S Q I V A A I K S R A D Q L   G A S V V V S M V E   R S G V E A C K A A   V H N L L A Q R V S G L I I N Y P L D D   Q D A I A V E A A C   T N V P A L F L D V   S D Q T P I N S I I F S H E D G T R L G   V E H L V A L G H Q   Q I A L L A G P L S   S V S A R L R L A G W H K Y L T R N Q I   Q P I A E R E G D W   S A M S G F Q Q T M   Q M L N E G I V P T A M L V A N D Q M A   L G A M R A I T E S   G L R V G A D I S V   V G Y D D T E D S S C Y I P P L T T I K   Q D F R L L G Q T S   V D R L L Q L S Q G   Q A V K G N Q L L P V S L V K R K T T L   A P N T Q T A S P R   A L A D S L M Q L A   R Q V S R L E S G Q           </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O.
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	LacI, the repressor of the lactose operon, plays a crucial role in the regulation of lactose metabolism. It functions by binding to the operator region and repressing the transcription of genes involved in lactose utilization. The binding affinity is altered in the presence of the inducer, allolactose, which leads to the derepression of the operon. As a homotetramer, LacI orchestrates the regulatory mechanisms that finely tune lactose metabolism in response to the cellular environment.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA