

## LacI WT Protein, E.coli (His)

Cat. No.:	HY-P701244
Synonyms:	rE.coLactose operon repressor/LacI, His; Lactose operon repressor; LacI
Species:	E.coli
Source:	E. coli
Accession:	P03023 (M1-Q360)
Gene ID:	945007
Molecular Weight:	approximately 42 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>
Biological Activity	Data is not available.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm sterile filtered 50 mM Tris-HCL, 300 mM NaCl, pH 8.0.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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
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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