lacY Protein, E.coli strain K12 (Cell-Free, His)

Cat. No.:	HY-P702353
Synonyms:	Lactose permease; Lactose-proton symport
Species:	E.coli
Source:	E. coli Cell-free
Accession:	P02920 (M1-F250)
Gene ID:	75202506
Molecular Weight:	34.4 kDa

PROPERTIES

AA Sequence	M Y Y L K N T N F W M F G L F F F F Y F F I M G A Y F P F F P I W L H D I N H I S K S D T G I I F A A I S L F S L L F Q P L F G L L S D K L G L R K Y L L W I I T G M L V M F A P F F I F I F G P L L Q Y N I L V G S I V G G I Y L G F C F N A G A P A V E A F I E K V S R R S N F E F G R A R M F G C V G W A L C A S I V G I M F T I N N Q F V F W L G S G C A L I L A V L L F F A K T D A P S S A T V A N A V G A N H S A F S L K L A L E L F R Q P K L W F L S L Y V I G V S C T Y D V F D Q Q F A N F F T S F
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
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. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
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	The lacY protein is responsible for facilitating the transport of beta-galactosides into the cell, operating as a symport system that concurrently imports a proton. This protein demonstrates the ability to transport various compounds, including lactose, melibiose, the synthetic disaccharide lactulose, or the analog methyl-1-thio-beta,D-galactopyranoside (TMG). However, it does not transport sucrose or fructose. Notably, lacY's substrate specificity is directed towards the

	galactopyranosyl moiety of the substrate.

Caution: Product has not been fully validated for medical applications. For research use only.

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