Lgt Protein, Lactococcus lactis subsp. lactis (Cell-Free, His)

Cat. No.:	HY-P702358
Synonyms:	Phosphatidylglycerol--prolipoprotein diacylglyceryl transferase
Species:	Others
Source:	E. coli Cell-free
Accession:	Q9CHU9 (M1-N261)
Gene ID:	69712606
Molecular Weight:	32.6 kDa

PROPERTIES

AA Sequence	M N N L F P F L A L N K I A L Q L G P L A I H W Y A I F I V G G A A L A V W L A C K E A P K R N I K T D D I I D F V L F A F P L G I V G A R L Y Y V I F Q W S Y Y S Q H P S Q I I A M W D G G G A I Y G S L I A G A I V L F V F S Y Y R M I H P L D L L D I T I P G V F L A Q A M G R W G N F V N Q E A Y G K I V S N L D W L P A F I R N Q M F I D G H Y R M P T F L F E S I G T L S G F I L V M V F R H R I K G L K R G D I F S F Y L V W Y G A V R F I V E G M R T D S L M L G P A R V S Q W L S V L L V I V G L V L F I Y R R M K K N
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	DGAT1 protein serves as a key enzyme in cellular metabolism by catalyzing the terminal and only committed step in triacylglycerol synthesis. Utilizing diacylglycerol and fatty acyl CoA as substrates, DGAT1 plays a crucial role in various physiological processes. It is highly expressed in the epithelial cells of the small intestine, where its activity is essential for the absorption of dietary fats. In the liver, DGAT1 contributes to the esterification of exogenous fatty acids to glycerol,

playing a vital role in fat synthesis for storage. Additionally, it is present in female mammary glands, participating in the production of fat in milk. While DGAT1 may be involved in very low-density lipoprotein (VLDL) assembly, it is not indispensable for survival in contrast to DGAT2. The protein also functions as the major acyl-CoA retinol acyltransferase (ARAT) in the skin, contributing to the maintenance of retinoid homeostasis and preventing retinoid toxicity that could lead to skin and hair disorders. Moreover, DGAT1 exhibits versatile acyltransferase activities, including acyl CoA:monoacylglycerol acyltransferase (MGAT), wax monoester, and wax diester synthases. Notably, it can use 1-monoalkylglycerol as an acyl acceptor for the synthesis of monoalkyl-monoacylglycerol.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA