LCC Protein, Unknown prokaryotic organism

Cat. No.:	HY-P702166
Synonyms:	Leaf-branch compost cutinase; LC-cutinase; LCC; PET-digesting enzyme; Poly(ethylene terephthalate) hydrolase; PET hydrolase; PETase
Species:	Others
Source:	E. coli
Accession:	G9BY57 (S36-Q293)
Gene ID:	/
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	The LCC protein plays a pivotal role in cellular processes as it catalyzes the hydrolysis of cutin, a polyester crucial for the structural composition of the plant cuticle. As evidenced by various studies, LCC exhibits esterase activity toward p-nitrophenol-linked aliphatic esters (pNP-aliphatic esters), demonstrating a preference for short-chain substrates (up to C4). Interestingly, LCC shows incapacity to hydrolyze olive oil. Moreover, this versatile enzyme demonstrates the ability to degrade poly(ethylene terephthalate), the most prevalent polyester plastic globally, and can also depolymerize poly(epsilon-caprolactone) (PCL), a synthetic aliphatic biodegradable polyester. The multifaceted substrate specificity of LCC underscores its significance in the enzymatic breakdown of diverse polyesters, highlighting its potential applications in both natural and synthetic polymer degradation processes.

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