

lipoxygenase Protein, Pseudomonas aeruginosa (FLAG, His)

Cat. No.:	HY-P702171
Synonyms:	lox; Linoleate 9/13-lipoxygenase; Oleate 10S-lipoxygenase
Species:	Others
Source:	E. coli
Accession:	Q8RNT4 (M1-I678)
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.
Reconstitution	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	<p>In the presence of oxygen, the lipoxygenase protein catalyzes the conversion of linoleate into (9S)-hydroperoxy-10,12-octadecenoate (9HPOD), with subsequent spontaneous decomposition into the corresponding 9-hydroxy-10,12-octadecenoate (9HOD). It also transforms linolenate into its hydroperoxy derivative, 13-hydroperoxy-9,11-octadecenoate (13HPOD), which spontaneously decomposes to the corresponding 13-hydroxy-9,11-octadecenoate (13HOD). Additionally, the enzyme exhibits activity on oleate, albeit to a lesser extent, converting it into (10S)-hydroperoxy-8E-octadecenoate, which undergoes spontaneous decomposition to form the corresponding 10-hydroxy-8E-octadecenoate. Notably, lipoxygenase demonstrates minimal activity on arachidonate. This enzymatic versatility highlights its role in mediating diverse fatty acid oxygenation reactions, contributing to the intricate metabolic pathways associated with lipid signaling and inflammation.</p>
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Caution: Product has not been fully validated for medical applications. For research use only.

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