

## Recombinant Enzyme Product Specification Sheet

<b>Cat. No.:</b>	PRO-E0356	<a href="#">add this product to cart</a>
<b>LOT:</b>	2012-0356-1	<a href="#">view other feruloyl esterases</a>
<b>Activity:</b>	Feruloyl esterase	
<b>Synonyms:</b>	Ferulic acid esterase; hydroxycinnamoyl esterase; FAE-III; cinnamoyl ester hydrolase; FAEA; cinnAE; FAE-I; FAE-II; 4-hydroxy-3-methoxycinnamoyl-sugar hydrolase	
<b>Nomenclature:</b>	<a href="#">CAZy [CE1, carbohydrate esterase family 1]</a>	
<b>Source organism:</b>	<i>Acetivibrio cellulolyticus</i> CD2	
<b>Enzyme Commission No.:</b>	<a href="#">3.1.1.73</a>	
<b>Activity:</b>	9.486 U/mL	} (37°C; pH 6.5; 187 µM methyl ferulate)
<b>Specific activity:</b>	1.169 U/mg	
<b>Purity:</b>	>95% as judged by SDS-PAGE	
<b>Form and storage:</b>	Supplied in 3.2 M ammonium sulphate. Store at 4°C (shipped at room temperature)	
<b>pH optimum:</b>	-	
<b>Temperature optimum:</b>	≥ 37°C	
<b>[Protein]:</b>	8.116 mg/mL	
<b>Sequence length:</b>	263 amino acids ( <a href="#">view sequence</a> )	
<b>Accession No.:</b>	<a href="#">ZP_09465527</a>	
<b>Molecular weight:</b>	32631.3 Da	(theoretical)
	~ 32000 Da	(observed by SDS-PAGE)
	-	(observed by mass spectrometry)
<b>Biological function:</b>	Likely to hydrolyse natural esters such as FAXX, FAX3 and PAX3. Feruloyl-polysaccharide + H <sub>2</sub> O = ferulate + polysaccharide	
<b>Potential application(s):</b>	<a href="#">Biomass conversion</a> , <a href="#">carbohydrate research</a>	
<b>Comments:</b>	This esterase is the N-terminal <a href="#">CE1</a> catalytic module of modular enzyme also containing a C-terminal CBM6 module and dockerin sequences. All microbial ferulate esterases are secreted into the culture medium. They are sometimes called hemicellulase accessory enzymes, since they help xylanases and pectinases to break down plant cell wall hemicellulose	

**Usage:** Agitate vial sufficiently to fully homogenise enzyme precipitate before use

**Assay:** One unit is defined as the amount of enzyme required to release 1  $\mu\text{mol}$  of ferulic acid per minute from 0.187 mM methyl ferulate in 50 mM sodium phosphate buffer, pH 6.5, at 37°C, and at 335 nm, and using a molar extinction coefficient of  $14000 \text{ M}^{-1} \text{ cm}^{-1}$ .

**Primary sequence:**

AAIQPTIPPSGYDQVRNNISHGQVLNISIYYSNATKSQRPARVYLPSGYSSSNKYSVMYLLHGIGGSENDWTLGGG  
SANVIADNLIADGKIKPSIIIVMPQCNAELPGDATNYGYERFTDDLIYSLVPYIESKYSVDTDPLHRSISGLSMGG  
GQSFNIGLPHVDMFPYVGAYSAAAPNTYSSDKLFPDGGTKAKQNLKLLFICCGTSDGLISFGRNVHTFCDSKSI PN  
TYWELEGRPHDWSVWKPGLWNYLQMLEDVGYTSQTTST

**Literature:** -