

Recombinant Enzyme Product Specification Sheet

Cat. No.:	PRO-E0250
LOT:	2008-0250
Activity:	Pectate lyase
Synonyms:	Polygalacturonic transeliminase; pectic acid transeliminase; polygalacturonate lyase; endopectin methyltranseliminase; pectate transeliminase; endogalacturonate transeliminase; pectic acid lyase; pectic lyase; α -1,4-D-endopolygalacturonic acid lyase; PGA lyase; PPase-N; endo- α -1,4-polygalacturonic acid lyase; polygalacturonic acid lyase; pectin <i>trans</i> -eliminase; polygalacturonic acid <i>trans</i> -eliminase
Nomenclature:	Pel10A, Pel10Acm, PL10, PL 10, polysaccharide lyase family 10
Source organism:	<i>Cellvibrio japonicus</i> NCIMB 10462
Enzyme Commission No.:	4.2.2.2
Activity:	6195 U/mL
Specific activity:	583.4 U/mg
	} (40°C; pH 10.0; polygalacturonic acid)
Purity:	>95 % as judged by SDS-PAGE
Form and storage:	Supplied in 3.2 M ammonium sulphate, store at 4°C (shipped at room temperature)
pH optimum:	~ 10
Temperature optimum:	57°C (stable up to 47°C)
[Protein]:	10.62 mg/mL
Sequence length:	323 amino acids (view sequence)
Accession No.:	Q9F7L3 ; AF279264
Molecular weight:	38035.2 Da (theoretical)
	~ 38000 Da (observed by SDS-PAGE)
	- (observed by mass spectrometry)
Biological function:	Cleavage of polygalacturonic acid or plant pectins after the action of pectin methyl esterase
Potential application(s):	Biomass conversion , carbohydrate research
Comments:	Pel10Acm comprises the C-terminal PL10 catalytic module (residues 327-649) from Pel10A from <i>Cellvibrio japonicus</i> NCIMB 10462

(formerly *Pseudomonas fluorescens* subsp. *cellulosa*). PDB: [1GXM](#),
[1GXN](#), [1G XO](#).

- Usage:** Agitate bottle sufficiently to fully homogenise enzyme precipitate before use
- Assay:** One unit is defined as the amount of enzyme required to release 1 μmol of 4,5-unsaturated galacturonide product per minute from 1.2 mg/mL polygalacturonic acid (Sigma; P-3850) in 50 mM CAPS buffer, pH 10.0, containing 0.98 mM CaCl_2 , at 40°C, as measured at 235 nm (using a molar extinction coefficient of 4600 cm^{-1})

Primary sequence:

TGRMLTLDGNPAANWLNNARTKWSASRADVVLSYQQNNGGWPKNLDYNSVGNNGGGNESGTIDNGATITEMVFLA
EVYKSGGNTKYRDAVRKAANFLVNSQYSTGALPQFYPLKGGYSDHATFNDNGMAYALTVLDFAANKRAPFDTDVF
SDSDRTRFKTAVTKGTDYILKAQWKQNGVLTWCAQHGDYQPKKARAYELESLSGSESVGVLAFLMTQPQTAE
IERAVRAGVAWFNSPRTYLEGYTYDSSLAATNPVPRAGSKMWYRFYDLNTNRGFFSDRDGSKFYDITQMSLERR
TGYSWGGNYGTSIIINFAQKVGYL

- Literature:**
1. [Brown et al. \(2001\) *Biochem. J.* **355**, 155-165](#)
 2. [Charnock et al. \(2002\) *PNAS* **99**, 12067-12072](#)