

Recombinant Enzyme Product Specification Sheet

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| Cat. No.: | PRO-E0023 |
| LOT: | 2008-0023 |
| Activity: | Endo-1,4- β -galactanase |
| Synonyms: | Galactanase; arabinogalactanase; arabinogalactan 4- β -D-galactanohydrolase; endo-1,4-beta-galactanase; arabinogalactan 4-beta-D-galactanohydrolase |
| Nomenclature: | CAZy [GH53, glycoside hydrolase family 53, member of clan GH-A] |
| Source organism: | <i>Clostridium thermocellum</i> ATCC 27405 |
| Enzyme Commission No.: | 3.2.1.89 |
| Activity: | 15000 U/vial |
| Specific activity: | 10000 U/mg |
| | } (60°C; pH 5.5; galactan) |
| Purity: | > 95 % as judged by SDS-PAGE |
| Form and storage: | Lyophilised powder, store at -20°C (shipped at room temperature) |
| pH optimum: | 5.5 (stable from 5 – 7.5) |
| Temperature optimum: | 60°C (stable up to 70°C) |
| [Protein]: | 1.5 mg/mL |
| Sequence length: | 310 amino acids (view sequence) |
| Accession No.: | ABN52631 |
| Molecular weight: | 36405.3 Da (theoretical) |
| | ~ 36600 Da (observed by SDS-PAGE) |
| | - (observed by mass spectrometry) |
| Biological function: | Catalyses the endohydrolysis of (1→4)- β -D-galactosidic linkages in arabinogalactans |
| Potential application(s): | Biomass conversion , carbohydrate research |
| Comments: | - |
| Usage: | Dissolve to 1.5 mg/mL in 50 mM MES buffer, pH 5.5, containing 20 mM NaCl and aliquot for storage at -20°C. The enzyme is stable for 6 months when stored in this manner |
| Assay: | One unit is defined as the amount of enzyme required to release 1 μ mol of galactose-reducing-sugar equivalents per minute from |

galactan in 50 mM MES buffer, pH 5.5, at 60°C, where reducing sugars are measured by the method of Miller (1959; *Anal. Chem.* **31**, 426-428)

Primary sequence:

MAPTFAKGADVSWLPMEANGYKIFYNDDGIEQDCLQILKDHGIDSIRLRVWVNPNGYCNKEETIKMALRAKKMG
FRIMINFHYSDSWADPGKQTKPAAWAKYDFNGLMKAVYDYTYDVMSALKANGITPEWVQVGNETNNGMLWEDGKA
TNSMRNFAWLINCGYDAVKAVSPETKVI VHIANGYDNALYRWIFDGITANGARFDVIGMSLYPTASDWPQLTNQC
LNNMKDMI SRYGKEIMICEIGMDYWEAQACKDFITDI IQKTKSLPDNKGLGVFYWEPQCYNWQYYNKGAFDLSGK
PTIALDAFLT

Literature:

1. Unpublished data