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ProductInformation

Endoglycoceramidase II
recombinant, from *Rhodococcus sp.*
expressed in *E. coli*

Product Number **E 9030**
Storage Temperature –20 °C

E.C. 3.2.1.123
Synonyms: EGCase II; Oligoglycosylglucosylceramide glycohydrolase

Product Description
Endoglycoceramidase II (EGCase II) is an endo-glycohydrolase. The enzyme is useful for structural studies of glycosphingolipids. In the presence of detergents, it hydrolyzes the linkage between the oligosaccharide and ceramide of acidic and neutral glycosphingolipids, resulting in intact oligosaccharides and ceramides. The enzyme does not act on galactosyl- and glucosyl-ceramides. It does not hydrolyze cerebrosides, sulfatides, and sphingomyelin. The galactosylceramide linkage of gala-type glycosphingolipids is not hydrolyzed. Globo-type glycosphingolipids are strongly resistant to hydrolysis by EGCase II.

Molecular weight: 58.9 kDa

Optimal pH: 5.5

Inhibition: 1 mM of Hg^{2+}, Zn^{2+}, and Cu^{2+}

This enzyme preparation is isolated and purified from *E. coli* carrying the gene for the *Rhodococcus sp*. enzyme. The product is supplied as 0.1 unit of ECGase II in 20 mM sodium acetate buffer, pH 6.0, containing 0.2% BSA and 0.1% Lubrol PX. This preparation contains detergent and does not contain Activator II.

Purity: This preparation is essentially free from the following exoglycosidase and other enzyme activities:

α-galactosidase, β-galactosidase, α-mannosidase, α-N-acetylgalactosaminidase, α-fucosidase, β-N-acetylgalactosaminidase, sialidase, β-N-acetylglucosaminidase, glycopeptidase, endo-β-N-acetylglucosaminidase, proteinase, and sphingomyelinase.

Substrate Specificity:
(1.5 milliunits of the enzyme was incubated with 10 nmole of the substrate at 37 °C for 16 hours.)

Substrate	Hydrolysis (%)
Ganglio series	
G_{T1b}	100
G_{D1a}	100
G_{M1a}	100
G_{M3}	100
Asialo G_{M1}	100
Globo Series	
Gb5Cer	19
Gb4Cer	10
Neolacto series	
IV^3 NeuAcα-nLC_4	100
IV^6 NeuAcα-nLC_4	100
IV^3 NeuAcαIII^3 Fucα-nLC_4 (SialylLewis X)	100
III^3 Fucα-nLC_4 (SialylLewis X)	100
Lacto series	
IV^3 NeuAcα-LC_4	100
IV^6 NeuAcα-LC_4	100
Lactosylceramide	100
Cerebrosides	
Glucosyl ceramide	0
Galactosyl ceramide	0
Sulfatide	0

Unit Definition: One unit will catalyze the hydrolysis of 1 μmole of asialo-G_{M1} per minute at 37 °C at pH 5.0.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
The product ships on dry ice and storage at or below –20 °C is recommended until use. Store the solution in aliquots at 2-8 °C once thawed and use within 2-3 days.

References

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7. Muramoto, K. et al, Biochem. Biophys. Res. Comm., **202**, 398-402 (1994).

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