3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

α(2-3) Sialyltransferase from Pasteurella multocida, recombinant expressed in Escherichia coli BL21(DE3)
Catalog Number **S1951**
Storage Temperature –20 °C

EC 2.4.99.4
Synonyms: CMP-N-acetylneuraminate:b-D-galactoside a-(2,3)-N-acetylneuraminyltransferase

Product Description

a(2-3) Sialyltransferase catalyzes the transfer of CMP-N-acetylneuraminate (CMP-sialic acid) to the b-D-galactosyl-1,4-N-acetyl-D-glucosaminyl termini on glycoproteins.

For the expressed Pasteurella multocida enzyme:

Molecular mass: 46.4 kDa

Isoelectric point (pI): 5.94

pH optimum for activity: 7.5–8.5.

This product is supplied as a lyophilized powder containing ≥20% protein with Tris-HCl and NaCl.

Specific Activity: ≥2 units per mg protein

Unit Definition: One unit will catalyze the formation of 1.0 µmole of Neu-5-Ac-α-2,3-Lac-MU from CMP-Neu5-Ac and Lac-β-O-MU per minute at 37 °C at pH 8.0.

Enzymatic activity assays are performed in 100 mM Tris-HCl buffer, pH 8.0, containing CMP-Neu-5-Ac (1 mM) and Lac-β-O-MU (1 mM) at 37 °C for 30 minutes and analyzed using HPLC with a fluorescence detector (excitation at 325 nm and emission at 372 nm).

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.

Preparation Instructions

Reconstitute the lyophilized powder with a volume of water in the range of 0.1 mL to 1 mL, to give a concentration in the range of 1 unit/mL (1 mL volume of water) to 10 units/mL (0.1 mL volume of water).

Solutions can be stored at 2–8 °C for 1–2 months after reconstitution. They can also be aliquoted and frozen at –70 °C or –20 °C for 1 year. Multiple freeze-thaw cycles should be avoided.

Storage/Stability

Store the product at –20 °C. It remains active for at least 1 year when stored properly.

References

1. Yu, H. et al., A multifunctional *Pasteurella multocida* sialyltransferase: a powerful tool for the synthesis of sialoside libraries. J. Am. Chem. Soc., **127**, 17618-17619 (2005).
2. Ni, L. et al., CMP-Induced structural changes in a multifunctional sialyltransferase from *Pasteurella multocida*. Biochemistry, **45**, 2139-2148 (2006).
3. Ni, L. et al., Crystal structures of a *Pasteurella multocida* sialyltransferase complexes with acceptor and donor analogs reveal substrate binding sites and catalytic mechanism. Biochemistry, **46**, 6288-6298 (2007).

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