Creative Enzymes®

[heparan sulfate]-glucosamine 3-sulfotransferase 1

Cat. No. EXWM-3382

Lot. No. (See product label)

Introduction

Description	This enzyme differs from the other [heparan sulfate]-glucosamine 3-sulfotransferases [EC 2.8.2.29 ([heparan sulfate]-glucosamine 3-sulfotransferase 2) and EC 2.8.2.30 ([heparan sulfate]-glucosamine 3-sulfotransferase 3)] by being the most selective for a precursor of the antithrombin-binding site. It has a minimal acceptor sequence of: → GlcNAc6S→ GlcA→ GlcN2S*+/-6S→ IdoA2S→ GlcN2S→, the asterisk marking the target (symbols as in 2-Carb-38) using +/- to mean the presence or absence of a substituent, and > to separate a predominant structure from a minor one. Thus Glc(N2S > NAc) means a residue of glucosamine where the N carries a sulfo group mainly but occasionally an acetyl group.). It can also modify other precursor sequences within heparan sulfate but this action does not create functional antithrombin-binding sites. These precursors are variants of the consensus sequence: → Glc(N2S > NAc)+/-6S→ GlcA→ GlcN2S*+/-6S→ GlcA > IdoA+/-2S→ Glc(N2S/NAc)+/-6S→. If the heparan sulfate substrate lacks 2-O-sulfation of GlcA residues, then enzyme specificity is expanded to modify selected glucosamine residues preceded by IdoA as well as GlcA.
Synonyms	heparin-glucosamine 3-O-sulfotransferase; 3'-phosphoadenylyl-sulfate:heparin-glucosamine 3-O-sulfotransferase; glucosaminyl 3-O-sulfotransferase; heparan sulfate D-glucosaminyl 3-O-sulfotransferase; isoform/isozyme 1 (3-OST-1, HS3ST1)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.8.2.23
CAS No.	183257-54-7
Reaction	3'-phosphoadenylyl sulfate + [heparan sulfate]-glucosamine = adenosine 3',5'-bisphosphate + [heparan sulfate]-glucosamine 3-sulfate
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.