Creative Enzymes®

Native Proteus vulgaris Chondroitinase ABC

Cat. No. NATE-0131

Lot. No. (See product label)

Introduction

Description	Chondroitinase ABC catalyzes the eliminative degradation of polysaccharides containing (1-4)-β-D-hexosaminyl and (1-3)-β-D-glucuronosyl or (1-3)-α-L-iduronosyl linkages to disaccharides containing 4-deoxy-β-D-gluc-4-enuronosyl groups. It acts on chondroitin 4-sulfate, chondroitin 6-sulfate, and dermatan sulfate, and acts slowly on hyaluronate. The molecular weight is found to be approximately 120 kDa with 2 non-identical subunits of molecular masses 86 kDa and 32 kDa. The pH optimum is found to be 8.0 with chondroitin sulfate and 6.8 with hyaluronic acid and tempeRature optimum is 37°C. 1 mM Zn2+ acts as an inhibitor, while 0.05 M acetate is an activator of the enzyme.
Applications	The enzyme has been used to study the consequences of inducing acute, long-lasting changes in chondroitin sulfate proteoglycans using adult rat brain cells. Glycosaminoglycans have been digested with chondroitinase ABC for chondroitin/dermatan sulfate quantitation in keratocyte cell cultures obtained from fresh bovine corneal stromae.
Synonyms	EC 4.2.2.4, chondroitinase; chondroitin ABC eliminase; chondroitinase ABC; chondroitin ABC lyase; chondroitin sulfate ABC lyase; ChS ABC lyase; chondroitin sulfate ABC endoeliminase; chondroitin sulfate ABC endolyase; ChS ABC lyase I; 9024-13-9

Product Information

Source	Proteus vulgaris
Form	lyophilized powder.
EC Number	EC 4.2.2.4
CAS No.	9024-13-9
Activity	50-250 units/mg protein (using chondroitin sulfate C as substrate); 0.3-3 units/mg solid (using chondroitin sulfate C as substrate)
Buffer	0.01% bovine serum albumin aqueous (BSA) solution: soluble
Unit Definition	One unit will liberate 1.0 μmole of 2-acetamido-2-deoxy-3-O-(β-D-gluc-4-ene-pyranosyluronic acid)-4-O-sulfo-D-galactose from chondroitin sulfate A or 1.0 μmole of 2-acetamido-2-deoxy-3-O-(β-D-gluc-4-ene-pyranosyluronic acid)-6-O-sulfo-D-galactose from chondroitin sulfate C per min at pH 8.0 at 37°C.

Storage and Shipping Information

Storage	−20°C