Creative Enzymes®

Native Crotalus Phospholipase A2

Cat. No. NATE-0591

Lot. No. (See product label)

Introduction

Description Phospholipases A2 (PLA2s) EC 3.1.1.4 are enzymes that release fatty acids from the second carbon group of glycerol. This particular phospholipase specifically recognizes the sn-2 acyl bond of phospholipids and catalytically hydrolyzes the bond releasing arachidonic acid and lysophospholipids. Upon downstream modification by cyclooxygenases, arachidonic acid is modified into active compounds called eicosanoids. Eicosanoids include prostaglandins and leukotrienes, which are categorized as anti-inflammatory and inflammatory mediators.

Synonyms EC 3.1.1.4; Phospholipases A2; PLA2s

Product Information

Species Crotalus

Source Crotalus adamanteus Venom

Form lyophilized powder

EC Number EC 3.1.1.4

CAS No. 9001-86-9

Molecular Weight 30 kDa (Wells 1969).

Purity chromatographically purified, dialyzed

Activity > 200 units per mg dry weight

Isoelectric point 4.55 and 4.40 for Aα and Aβ respectively (Saito 1962).

Specificity Substrate specificity has been investigated (VanDeenen 1963).

Activators Calcium ion (Dennis 1973).

Inhibitors Zinc, barium, and manganese ions (Uthe 1971). Also see Golec et al. (1992).

Unit Definition One Unit releases one micromole of acid from soybean lecithin per minute at 25°C, pH 8.9

Storage and Shipping Information

Storage Store at 2-8°C

Stability The enzyme is stable at 90°C and pH 3.0 for at least five minutes. (Uthe 1971; Saito 1962).