

Phospholipase A2 (PLA2) from Porcine pancreas

P1501339

Phospholipase A2 (PLA2) is a hydrolytic enzyme that catalyzes the di acyl group on phospholipid glycerol molecules. It is also a rate limiting enzyme generated by bioactive substances such as arachidonic acid (AA), prostaglandins, and platelet activating factor (PAF). The lipid mediators produced play a crucial role in the activation of membrane channels, information transmission, hemodynamics, and pathophysiological processes during inflammation and tissue damage, as well as in regulating intracellular and extracellular metabolism. PLA2 activity is elevated in the serum of patients with acute pancreatitis, septic shock, trauma, and multiple organ failure (MSOF). In multiple trauma, changes in PLA2 activity may be an early signaling parameter leading to tissue damage in MSOF.

Storage Conditions

Store at -20°C long term (2 years). Upon reconstitution, it is recommended to aliquot. Avoid freeze/thaw cycle.

Properties

1. Phospholipase A2 is a small molecule protein rich in disulfide bonds, with 124 residues, and is a calcium dependent enzyme.
2. Compared with monomer substrates, it exhibits higher catalytic activity towards aggregated substrates.
3. The preferred substrates are phosphatidylcholine, phosphatidylethanolamine, and their acetal phospholipid analogues.

Stability

Stable in a wide pH environment (60 °C, inactivated for 10 minutes, pH 8.0). It is highly sensitive to temperature, pH, and various factors that cause protein denaturation, and is highly susceptible to external conditions that can alter its conformation and properties.

Definition of Unit

Under pH 8.0 and 37 ° C conditions, one unit will Hydrolysis 1.0 µmol soybean L-α-Phosphatidylcholine to L- α- Lysophosphatidylcholine and fatty acids per minute.

Specification

Items	Specification
1. Appearance	White or almost white, crystalline or amorphous powder.
2. Appearance of solution(10mg/ml)	Clear.
3. Activity	≥200LeU/mg.



Application

Used for the decomposition of oily foods, as well as for the decomposition of phospholipids and their partial decomposition products. It can also be used for egg yolk modification, making salad sauce, and salad oil.

Attention

1. After accidental contact with eyes, immediately rinse with plenty of water and seek medical advice;
2. For your safety and health, please wear a lab coat and disposable gloves.

