

PLA2G2E Protein, Mouse, Recombinant (His)

General Information

Synonyms:	phospholipase A2, group IIE; Phospholipase A2 IIE
Protein Construction:	A DNA sequence encoding the mouse PLA2G2E (Q9QUL3) (Met 1-Cys 142) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Asn 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9QUL3
Molecular Weight:	15.5 kDa (predicted); 18 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 10% glycerol, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Group IIE secretory phospholipase A2, also known as GIIE sPLA2, sPLA2-IIE, Phosphatidylcholine 2-acylhydrolase 2E and PLA2G2E is a secreted protein that belongs to the phospholipase A2 family. Mammalian secretory phospholipase A2s (sPLA2s) form a family of structurally related enzymes that are involved in a variety of physiological and pathological processes via the release of arachidonic acid from membrane phospholipids or the binding to specific membrane receptors. Phospholipases A2 / PLA2 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. Phospholipases A2 / PLA2 are commonly found in mammalian tissues as well as insect and snake venom. Venom from both snakes and insects is largely composed of melittin, which is a stimulant of Phospholipases A2 / PLA2. Due to the increased presence and activity of Phospholipases A2 / PLA2 resulting from a snake or insect bite, arachidonic acid is released from the phospholipid membrane disproportionately. As a result, inflammation and pain occur at the site. PLA2G2E catalyzes the calcium-dependent hydrolysis of the 2-acyl groups in 3-sn-phosphoglycerides. Has a preference for arachidonic-containing phospholipids.

Reference

- Dennis EA, et al., 1994, J. Biol. Chem. 269 (18): 13057-60.
Nicolas JP, et al., 1997, J. Biol. Chem. 272 (11): 7173-81.
Six DA, et al., 2000, Biochim. Biophys. Acta 1488 (1-2): 1-19.
Mounier, C.M. et al., 2008, Br J Cancer. 98 (3):587-95.

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