

## PLA2G12B Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	Fksg71;2010002E04Rik;Pla2g13;h1b218;phospholipase A2, group XIIB
Protein Construction:	A DNA sequence encoding the mouse PLA2G12B (NP_076019.2) (Met 1-Leu 195) was expressed, with a C-terminal polyhistidine tag. Predicted N terminal: Gln 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q8VC81
Molecular Weight:	21 kDa (predicted); 24 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:	> 95 % 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 20 mM NaAc, 100 mM NaCl, pH 5.0. 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 XIIB secretory phospholipase A2-like protein, also known as Group XIII secretory phospholipase A2-like protein, GXIII sPLA2-like, sPLA2-GXIIB, GXIIB, PLA2G13 and PLA2G12B, is a secreted protein that belongs to the phospholipase A2 family. PLA2G12B / PLA2G13 is strongly expressed in liver, small intestine and kidney. 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.

### Reference

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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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