

# Recombinant Human PA2GE Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP50761

Size: 10ug, 100ug

Protein Name: Group IIE secretory phospholipase A2 (GIIE sPLA2) (sPLA2-IIE) (EC 3.1.1.4)  
(Phosphatidylcholine 2-acylhydrolase 2E)

Synonym: PLA2G2E

UniProt ID: Q9NZK7

UniProt Link: [www.uniprot.org/uniprotkb/Q9NZK7/entry](http://www.uniprot.org/uniprotkb/Q9NZK7/entry)

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 142 AA

Molecular Weight: 16 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MKSPHVLVFLCLLVALVTGNLVQFGVMIEKMTGKSALQYNDYGCYCGIGGSHWPVDQTDWCCHAH  
DCCYGRLEKLGCEPKLEKYLFVSERGIKAGRTTCQRLTCECDKRAALCFRRNLGTYNRKYAHYP  
NKLCTGPTPPC

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant Group IIE secretory phospholipase A2 (GIIE sPLA2) (sPLA2-IIE) (EC 3.1.1.4) (Phosphatidylcholine 2-acylhydrolase 2E) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Secretory calcium-dependent phospholipase A2 that primarily targets extracellular phospholipids (PubMed:10681567, PubMed:11922621, PubMed:28883454). Hydrolyzes the ester bond of the fatty acyl group attached at sn-2 position of phospholipids (phospholipase A2 activity), releasing various unsaturated fatty acids including oleoate, linoleoate, arachidonate, docosahexaenoate and lysophosphatidylethanolamines in preference to lysophosphatidylcholines (PubMed:10681567, PubMed:28883454). In response to high-fat diet, hydrolyzes minor lipoprotein phospholipids including phosphatidylserines, phosphatidylinositols and phosphatidylglycerols, altering lipoprotein composition and fat storage in adipose tissue and liver (By similarity). May act in an autocrine and paracrine manner (PubMed:11922621). Contributes to lipid remodeling of cellular membranes and generation of lipid mediators involved in pathogen clearance. Cleaves sn-2 fatty acyl chains of phosphatidylglycerols and phosphatidylethanolamines, which are major components of membrane phospholipids in bacteria (PubMed:11922621). Acts as a hair follicle phospholipase A2. Selectively releases lysophosphatidylethanolamines (LPE) and various unsaturated fatty acids in skin to regulate hair follicle homeostasis (By similarity). May regulate the inflammatory response by releasing arachidonate, a precursor of prostaglandins and leukotrienes (PubMed:11922621). Upon allergen exposure, may participate in allergic inflammatory response by enhancing leukotriene C4 synthesis and degranulation in mast cells (By similarity).

**Subcellular Localization:** Secreted . Cytoplasm . Note=Through binding to heparan sulfate proteoglycan, may be localized to cytoplasmic compartments enriched in anionic phospholipids.

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.