

DESCRIPTION

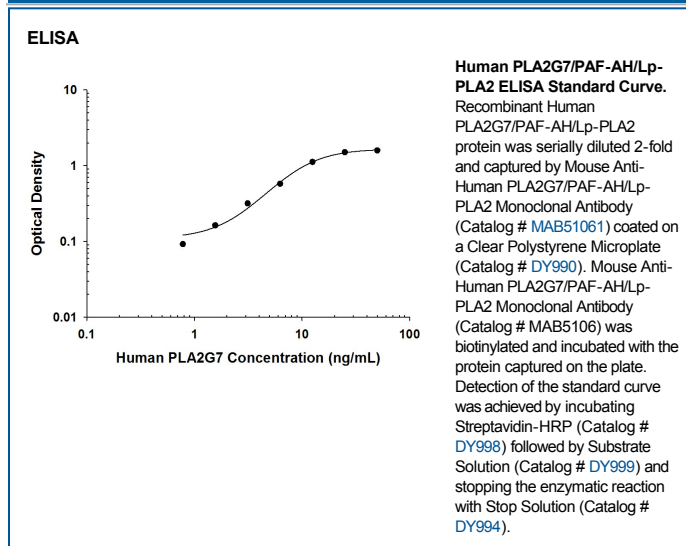
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| Species Reactivity | Human |
| Specificity | Detects human PLA2G7Phe22-Asn441 in direct ELISAs. |
| Source | Monoclonal Mouse IgG ₁ Clone # 973010 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>E. coli</i> -derived recombinant human PLA2G7/PAF-AH/Lp-PLA2 Phe22-Asn441 Accession # Q13093 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

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| ELISA | This antibody functions as an ELISA detection antibody when paired with Mouse Anti-Human PLA2G7/PAF-AH/Lp-PLA2 Monoclonal Antibody (Catalog # MAB51061). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Human PLA2G7/PAF-AH/Lp-PLA2 Quantikine ELISA Kit (Catalog # DPLG70) for a complete optimized ELISA.</i> |
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DATA



PREPARATION AND STORAGE

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| Reconstitution | Reconstitute at 0.5 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

Secretory phospholipase A₂ is an enzyme that hydrolyses the *Sn*-2 ester bond of phospholipids, generating free fatty acids and lysophospholipids (1-3). Most secretory PLA₂s are stored in cytoplasmic granules and are released in the extracellular environment on appropriate cell activation. Thus, they are present at higher concentration in the plasma and biologic fluids of patients with systemic inflammatory, autoimmune, or allergic disease, such as acute pancreatitis, rheumatoid arthritis, bronchial asthma, and allergic rhinitis. Also known as Lp-PLA₂, PLA2G-VII is a plasma enzyme bound to lipoproteins: 80% bound to LDL, 15%-20% to HDL, and the remainder to VLDL (4-6). It is produced in major by mature macrophages and activated platelets. In contrast to other classical sPLA₂s, PLA2G-VII has poor specificity toward *Sn*-2 long chain fatty acids, unless heavily oxidized, and undergoes the catalysis of its substrates in the aqueous phase rather than at the interfacial surface of lipids. Thus, it has high specificity for water-soluble phospholipids in plasma including oxidatively-modified phospholipids and platelet-activating factor (PAF). Because of the latter activity, it is also known as PAF acetylhydrolase (PAF-AH). Lack of human PLA2G-VII is related to a higher risk for stroke and heart disease.

References:

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2. Triggiani, M. *et al.* (2005) *J. Allergy Clin. Immunol.* **116**:1000.
3. Murakami, M. and Kudo, I. (2004) *Biol. Pharm. Bull.* **27**:1158.
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5. Karabina, S.-A., and Ninio, E. (2006) *Biochim. Biophys. Acta*, **1761**:1351.
6. Karasawa, K. (2006) *Biochim. Biophys. Acta*, **1761**:1359.