Product Name: Human Lysosomal Phospholipase A2, active

Catalog Number: E-7000

Size: 10 µg

**Product Description:** Human β Lysosomal Phospholipase A2 (hLPLA2) with C-terminal 6-His tag was expressed in Hek 293 cells and purified using nickel-NTA chromatography.

**Storage and Stability:** Supplied in HEPES (pH 7.4), 250 mM Sucrose and 1mM EDTA. Store at -20 ºC. The enzyme is stable for six months from date of arrival. Avoid repeated freeze/thaw cycles.

**Enzyme Purity and Activity:** See Certificate of Analysis for lot specific enzyme information.

**Background:** LPLA2 is a calcium-independent PLA2, localized to lysosomes, has an acidic pH optimum, and transacylates lipophilic primary alcohols. Belonging to the α/β-hydrolase superfamily, LPLA2 is a water soluble glycoprotein consisting of a single peptide chain with a molecular weight of 45 kDa. In addition to Phospholipase A2 activity, LPLA2 exhibits esterase activity over a wide pH range, and is measured with nitrophenylbutyrate as a substrate. LPLA2 is secreted under certain conditions. For example, Alveolar macrophages (AMs) secrete LPLA2 following stimulation by Zymosan. Secreted LPLA2 is taken up by AMs via a mannose receptor and transported into acidic compartments. LPLA2-deficient mouse AMs result in a significant accumulation of glycerol-phospholipid and formation of lamellar inclusion bodies, which are characteristic of cellular phospholipidosis. Thus, LPLA2 may be important in the regulation of phospholipids in those cells. Cationic amphiphilic drugs (CADs) can interact with phospholipids and may lead to a reduction in LPLA2 activity, resulting in cellular phospholipidosis in MDCK cells. This suggests that LPLA2 may play an important role in some forms of CAD-induced phospholipidosis in humans.

**Related Products:**
- Fluorogenic substrate, DBPC (catalog # L-3000).

**References:**