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Product Information

Anti-Phospholipase A2 (cPLA2) (N-terminal)
produced in rabbit, affinity isolated antibody

Product Number **SAB4200211**

Product Description

Anti-Phospholipase A2 (cPLA2) (N-terminal), is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human cPLA$_2$ (GeneID 5321), conjugated to KLH. The corresponding sequence is highly conserved (84% sequence identity) in mouse and rat cPLA$_2$. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Phospholipase A2 (cPLA2) (N-terminal), specifically recognizes human cPLA$_2$. The antibody can be used in several immunochemical techniques including immunoblotting (~100 kDa) and immunoprecipitation. An additional band of ~140 kDa may be observed. Detection of the cPLA$_2$ band by immunoblotting is specifically inhibited by the cPLA$_2$ immunizing peptide.

Cytosolic phospholipase A$_2$, group IVa, (cPLA$_2$, also known as cPLA2α, PLA2G4A) is a member of the PLA$_2$ superfamily that catalyzes the cleavage of fatty acids from the *sn-2* position of phospholipids.[1,2] PLA$_2$ isoenzymes vary in their cellular localizations, Ca^{2+} sensitivities, and substrate specificities. They catalyze the synthesis of precursors of proinflammatory mediators, such as prostaglandins and leukotrienes, through the release of arachidonic acid (AA) from membrane phospholipids.

PLA$_2$s play crucial roles in several cellular processes, including intracellular membrane trafficking, differentiation, proliferation, and apoptosis. They are thought to play a role in oxidative and inflammatory responses in cerebral ischemia, Alzheimer's disease (AD), and neuronal injury.[3,4]

cPLA$_2$ mRNA is widely expressed in tissues and in various cell types including platelets, macrophages, and endothelial cells. Upon cell stimulation, cPLA$_2$ is activated by increased intracellular Ca^{2+} levels and phosphorylation, resulting in its translocation from the cytosol to the endoplasmic reticulum and the nuclear membrane.[5] cPLA$_2$ is phosphorylated and activated by either ERK1/2, p38 MAPK, or JNK at three sites, Ser^{505}, Ser^{515}, and Ser^{727}, depending on the cell type and agonist.[1,6,7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at −20 °C. For continuous use, the product may be stored at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1.5-3 μg/mL is recommended using extracts of HEK-293T cells overexpressing human cPLA$_2$.

Immunoprecipitation: a working antibody amount of 15-30 μg is recommended using HEK-293T cells overexpressing human cPLA$_2$.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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VS,ER,AH,KAA,PHC,MAM 07/19-1