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Product Information

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

Catalog Number **SAB4200210**

Product Description

Anti-Phospholipase A2 (cPLA2) is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 242-258 of human $cPLA_2$ (GeneID 5321), conjugated to KLH. The corresponding sequence is identical in mouse and rat $cPLA_2$. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Phospholipase A2 (cPLA2), specifically recognizes human $cPLA_2$. The antibody can be used in several immunochemical techniques including immunoblotting (~100 kDa). 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_2s 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

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material 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. Discard working dilutions if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 2-4 µg/mL is recommended using extracts of HEK-293T cells over expressing human $cPLA_2$.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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ER,AH,KAA,PHC 09/10-1