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Phospho-cPLA2 (Ser505) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R Mk	Sensitivity: Endogenous	MW (kDa): 95	Source/Isotype: Rabbit	UniProt ID: #P47712	Entrez-Gene Id: 5321
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Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-cPLA2 (Ser505) Antibody detects endogenous levels of cPLA2 only when phosphorylated at serine 505. It does not cross-react with the secreted PLA2 (sPLA2) or cytosolic Ca²⁺ independent PLA2 (iPLA2).

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser505 of human cPLA2. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Cytosolic phospholipase A2 (cPLA2) is a ubiquitously distributed enzyme that catalyzes the hydrolysis of the sn-2 acyl bond of glycerolipids to produce lysophospholipids and release arachidonic acid (1). cPLA2 has been implicated in diverse cellular responses such as mitogenesis, differentiation, inflammation and cytotoxicity (1). Calcium binding to the amino-terminal CalB domain of cPLA2 promotes the translocation of cPLA2 from cytosol to membrane, where cPLA2 cleaves arachidonic acid from natural membrane (2). Phosphorylation of cPLA2 by MAPK (p42/44 and p38) at Ser505 (3,4) and Ser727 (5) stimulates its catalytic activity.

Background References

1. Leslie, C.C. (1997) *J. Biol. Chem.* 272, 16709-16712.
2. Clark, J. D. et al. (1991) *Cell* 65, 1043-1051.
3. Lin, L. L. et al. (1993) *Cell* 72, 269-278.
4. Kramer, R.M. (1996) *J. Biol. Chem.* 271, 27723-27729.
5. Hefner, Y. et al. (2000) *J. Biol. Chem.* 275, 37542-37551.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

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