

Phospho-ALOX5 (Ser271) Rabbit pAb
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Catalog # AP94529**Specification**

Phospho-ALOX5 (Ser271) Rabbit pAb - Product Information

Application	IHC-P
Primary Accession	P12527
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	78087

Phospho-ALOX5 (Ser271) Rabbit pAb - Additional Information**Gene ID** 25290**Other Names**

Polyunsaturated fatty acid 5-lipoxygenase, 1.13.11.-, Alox5 {ECO:0000312|RGD:2096}

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Phospho-ALOX5 (Ser271) Rabbit pAb - Protein Information**Name** Alox5 {ECO:0000312|RGD:2096}**Function**

Catalyzes the oxygenation of arachidonate to 5- hydroperoxyeicosatetraenoate (5-HPETE) followed by the dehydration to 5,6- epoxyeicosatetraenoate (Leukotriene A4/LTA4), the first two steps in the biosynthesis of leukotrienes, which are potent mediators of inflammation. Also catalyzes the oxygenation of arachidonate into 8- hydroperoxyicosatetraenoate (8-HPETE) and 12- hydroperoxyicosatetraenoate (12-HPETE). Displays lipoxin synthase activity being able to convert (15S)-HETE into a conjugate tetraene. Although arachidonate is the preferred substrate, this enzyme can also metabolize oxidized fatty acids derived from arachidonate such as (15S)-HETE, eicosapentaenoate (EPA) such as (18R)- and (18S)-HEPE or docosahexaenoate (DHA) which lead to the formation of specialized pro- resolving mediators (SPM) lipoxin and resolvins E and D respectively, therefore it participates in anti-inflammatory responses (By similarity). Oxidation of DHA directly inhibits endothelial cell proliferation and sprouting angiogenesis via peroxisome proliferator- activated receptor gamma (PPARgamma). It does not catalyze the oxygenation of linoleic acid and does not convert (5S)-HETE to lipoxin isomers. In addition to inflammatory processes, it participates in dendritic cell migration, wound healing through an antioxidant mechanism based on heme oxygenase-1 (HO-1) regulation expression, monocyte adhesion to the endothelium via ITGAM expression on monocytes. Moreover, it helps establish an adaptive

humoral immunity by regulating primary resting B cells and follicular helper T cells and participates in the CD40-induced production of reactive oxygen species (ROS) after CD40 ligation in B cells through interaction with PIK3R1 that bridges ALOX5 with CD40. May also play a role in glucose homeostasis, regulation of insulin secretion and palmitic acid-induced insulin resistance via AMPK. Can regulate bone mineralization and fat cell differentiation increases in induced pluripotent stem cells (By similarity).

Cellular Location

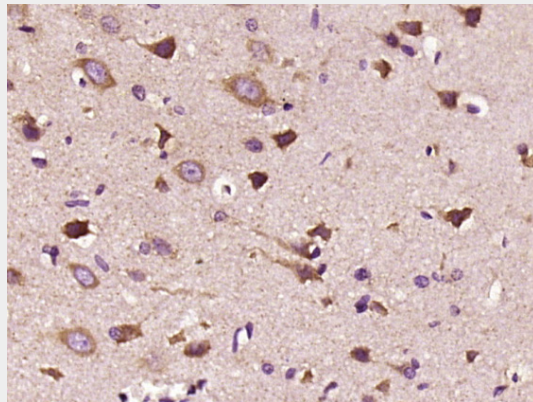
Cytoplasm {ECO:0000250|UniProtKB:P09917, ECO:0000250|UniProtKB:P48999}. Nucleus matrix {ECO:0000250|UniProtKB:P09917}. Nucleus membrane {ECO:0000250|UniProtKB:P09917}; Peripheral membrane protein {ECO:0000250|UniProtKB:P09917}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P09917}. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P09917}. Nucleus envelope {ECO:0000250|UniProtKB:P09917}. Nucleus intermembrane space {ECO:0000250|UniProtKB:P09917}. Note=Shuttles between cytoplasm and nucleus. Found exclusively in the nucleus, when phosphorylated on Ser- 272. Calcium binding promotes translocation from the cytosol and the nuclear matrix to the nuclear envelope and membrane association {ECO:0000250|UniProtKB:P09917}

Phospho-ALOX5 (Ser271) Rabbit pAb - Protocols

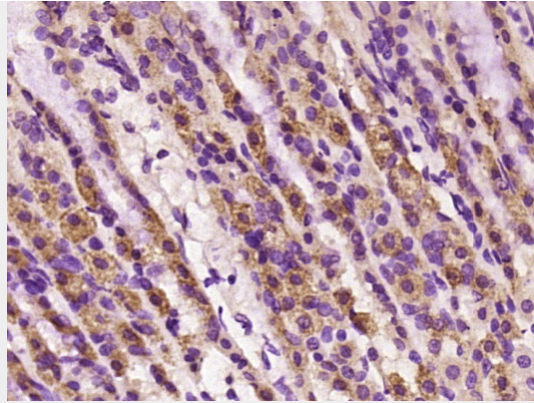
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

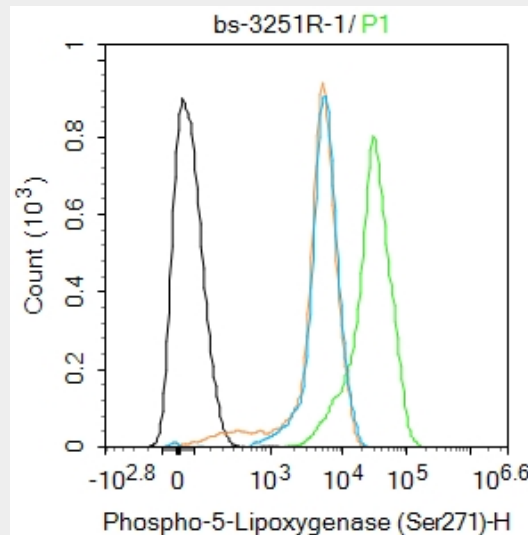
Phospho-ALOX5 (Ser271) Rabbit pAb - Images



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho-5-Lipoxygenase(Ser271)) Polyclonal Antibody, Unconjugated (AP94529) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat stomach); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho-5-Lipoxygenase(Ser271)) Polyclonal Antibody, Unconjugated (AP94529) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control—black line—:A431. Primary Antibody (green line): Rabbit Anti-Phospho-5-Lipoxygenase (Ser271) antibody (AP94529) Dilution:1ug/Test; Secondary Antibody—white blue line—: Goat anti-rabbit IgG-AF488 Dilution: 0.5ug/Test. Isotype control—orange line—: Normal Rabbit IgG Protocol The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C, The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

Phospho-ALOX5 (Ser271) Rabbit pAb - Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.