

**Phospho-ALOX5 (Ser663) Rabbit pAb**  
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**Catalog # AP94530**

## Specification

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### Phospho-ALOX5 (Ser663) Rabbit pAb - Product Information

Application	IHC-P, WB
Primary Accession	<a href="#">P12527</a>
Reactivity	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	78087

### Phospho-ALOX5 (Ser663) 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 (Ser663) 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

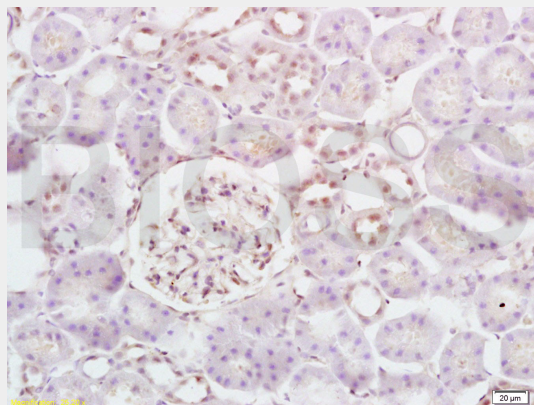
Cytoplasm {ECO:0000250|UniProtKB:P09917, ECO:0000250|UniProtKB:P48999}. Nucleus matrix {ECO:0000250|UniProtKB:P09917}. Nucleus membrane {ECO:0000250|UniProtKB:P09917}; Peripheral membrane protein {ECO:0000250|UniProtKB:P09917}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P09917}. Cytoplasm, 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 (Ser663) Rabbit pAb - Protocols

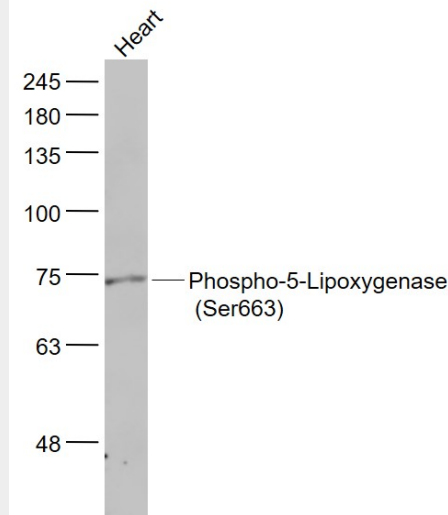
Provided below are standard protocols that you may find useful for product applications.

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

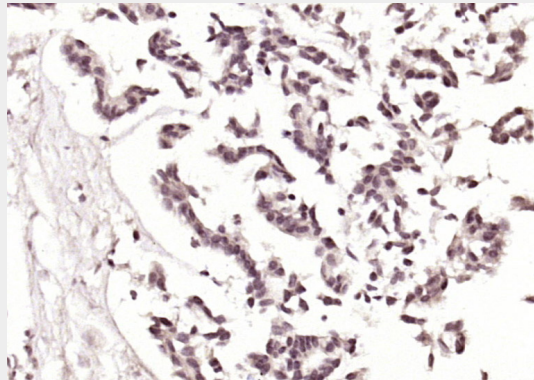
#### Phospho-ALOX5 (Ser663) Rabbit pAb - Images



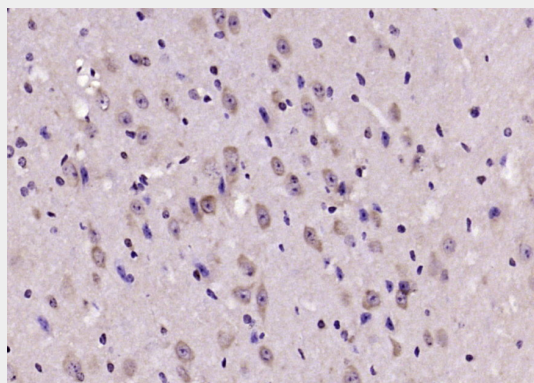
Tissue/cell: rat kidney tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer ( 0.01M, pH 6.0 ), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-Phospho-5-Lipoxygenase(Ser663) Polyclonal Antibody, Unconjugated(AP94530) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Sample: Heart (Rat) Lysate at 40 ug Primary: Anti- Phospho-5-Lipoxygenase (Ser663) (AP94530) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 78 kD Observed band size: 75 kD



Paraformaldehyde-fixed, paraffin embedded (human gastric carcinoma); 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 (Ser663)) Polyclonal Antibody, Unconjugated (AP94530) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (mouse 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 (Ser663)) Polyclonal Antibody, Unconjugated (AP94530) at 1:200

overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

### **Phospho-ALOX5 (Ser663) Rabbit pAb - Background**

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