

**Phospho-Ser523 5-Lipoxygenase Antibody**  
**Affinity purified rabbit polyclonal antibody**  
**Catalog # AN1074****Specification**

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**Phospho-Ser523 5-Lipoxygenase Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P09917</a>
Reactivity	Human, Rat
Predicted	Monkey
Host	Rabbit
Clonality	polyclonal
Calculated MW	80 KDa

**Phospho-Ser523 5-Lipoxygenase Antibody - Additional Information**

Gene ID	240
Gene Name	ALOX5
<b>Other Names</b>	
Arachidonate 5-lipoxygenase, 5-LO, 5-lipoxygenase, ALOX5, LOG5	

**Target/Specificity**

Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser523 conjugated to KLH.

**Dilution**

WB~~ 1:1000

**Format**

Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

**Antibody Specificity**

Specific for the ~80k 5-LO phosphorylated at Ser523 in Western blots

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Phospho-Ser523 5-Lipoxygenase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Shipping**

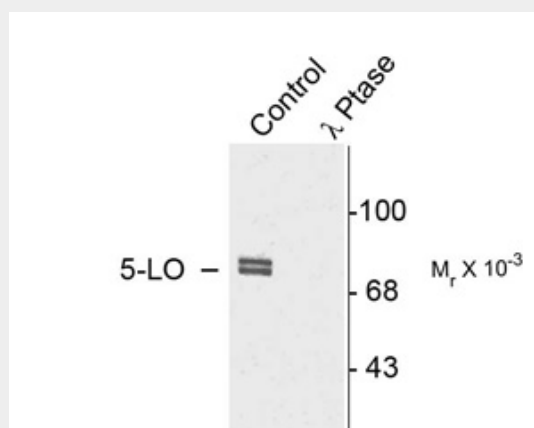
Blue Ice

**Phospho-Ser523 5-Lipoxygenase Antibody - 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-Ser523 5-Lipoxygenase Antibody - Images



Western blot of rat cortex lysate showing specific immunolabeling of the ~80k doublet of 5-LO phosphorylated at Ser523 (Control). The phosphospecificity of this labeling is shown in the second lane (lambda-phosphatase: λ-Ptase). The blot is identical to the control except that it was incubated in λ-Ptase (1200 units for 30 min) before being exposed to the 5-LO Ser523 antibody. The immunolabeling is completely eliminated by treatment with λ-Ptase.

### Phospho-Ser523 5-Lipoxygenase Antibody - Background

The enzyme 5-lipoxygenase (5-LO) plays a key role in regulating the production of leukotrienes (LTs) (Funk, 2001). Overproduction of LTs contributes to several diseases, most notably chronic inflammatory diseases, including asthma (Drazen et al., 1994), fibrosis (Wilborn et al., 1996) and atherosclerosis (Dwyer et al., 2004). Recent work has demonstrated that the activity of 5-LO is regulated by PKA phosphorylation of serine-523 in 5-LO (Luo et al., 2004). Under normal conditions, this phosphorylation may be important in limiting inflammation. Abnormal signaling through cAMP and PKA, then, could contribute to a variety of diseases, including those characterized by chronic inflammation. The phospho-specific antibody to Ser523 on 5-LO is thus likely to provide a valuable tool for studies of the role of 5-LO regulation in diseases such as asthma, fibrosis and atherosclerosis

### Phospho-Ser523 5-Lipoxygenase Antibody - References

- Drazen JM, Lilly CM, Sperling R, Rubin P, Israel E (1994) Role of cysteinyl leukotrienes in spontaneous asthmatic responses. *Adv. Prostaglandin Thromboxane Leukot Res* 22:251-262.
- Dwyer JH, Allayee H, Dwyer KM, Fan J, Wu H, Mar R, Lusis AJ, Mehrabian M (2004) Arachidonate 5-lipoxygenase promoter genotype, dietary arachidonic acid, and atherosclerosis. *New England J Med* 350:29-37.
- Funk, CD (2001) Prostaglandins and leukotrienes: advances in eicosanoid biology. *Science* 294:1871-1875.
- Luo M, Jones SM, Phare SM, Coffey MJ, Peters-Golden M, Brock TG (2004) Protein kinase A inhibits

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Wilborn J, Bailie M, Coffey M, Burdick M, Strieter R, Peters-Golden M. (1996) Constitutive activation of 5-lipoxygenase in the lungs of patients with idiopathic pulmonary fibrosis. J Clin Invest 97:1827-1836.

Luo M, Jones SM, Phare SM, Coffey MJ, Peters-Golden M, Brock TG.(2004) Protein kinase A inhibits leukotriene synthesis by phosphorylation of 5-lipoxygenase on serine 523. J Biol Chem. 279(40):41512-20. Epub 2004 Jul 26.