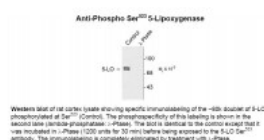




5 Lipoxygenase (phospho Ser523) Antibody

CATALOG NUMBER: 50-244



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: lambda-Ptase). The blot is identical to the control except that it was incubated in lambda-Ptase (1200 units for 30 min) before being exposed to the 5-LO Ser523 antibody. The immunolabeling is completely eliminated by treatment with lambda-Ptase.

Specifications

SPECIES REACTIVITY:	Human, Rat
TESTED APPLICATIONS:	WB
APPLICATIONS:	The antibody has been directly tested for reactivity in Western blots with rat and human tissue. It is anticipated that the antibody will react with non human primates based on the fact that these species have 100% homology with the amino acid sequence used as antigen.
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.
PREDICTED MOLECULAR WEIGHT:	80
IMMUNOGEN:	Phosphopeptide corresponding to amino acid residues surrounding the phospho-Ser523 of human 5-lipoxygenase (5-LO).
HOST SPECIES:	Rabbit

Properties

PURIFICATION:	Affinity Purified
PHYSICAL STATE:	Liquid
BUFFER:	100 uL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 ug per mL BSA and 50% glycerol.
STORAGE CONDITIONS:	5 Lipoxygenase antibody can be stored at -20°C and is stable at -20°C for at least 1 year.
CLONALITY:	Polyclonal
CONJUGATE:	Unconjugated

Additional Info	
ALTERNATE NAMES:	5-LO, 5LPG, LOG5, 5-LOX,
ACCESSION NO.:	P09917
PROTEIN GI NO.:	126407
OFFICIAL SYMBOL:	ALOX5
GENE ID:	240

Background	
BACKGROUND:	<p>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.</p>
REFERENCES:	<p>1) 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.</p> <p>2) Dwyer JH, Allayee H, Dwyer KM, Fan J, Wu H, Mar R, Lusi AJ, Mehrabian M (2004) Arachidonate 5-lipoxygenase promoter genotype, dietary arachidonic acid, and atherosclerosis. New England J Med 350:29-37.</p> <p>3) Funk, CD (2001) Prostaglandins and leukotrienes: advances in eicosanoid biology. Science 294:1871-1875.</p>

FOR RESEARCH USE ONLY

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