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Monoclonal antibody against human 12-Lipoxygenase (12-LOX/ALOX12)

Product No. ADG0043

Description

12-Lipoxygenase (12-LOX) also known as Platelet-type 12-Lipoxygenase or arachidonate 12-lipoxygenase (ALOX12).

The enzyme acts on different polyunsaturated fatty acid substrates to generate bioactive lipid mediators including eicosanoids and lipoxins.

12-LOX protein plays an important role in inflammation and oxidation, while abnormal DNA methylation and genetic variants of 12-LOX are associated with various human diseases and pathological phenotypes, such as cardiovascular disease, diabetes, neurodegenerative diseases, respiratory system disease, cancer, infection, etc.

Properties

The antibody reacts with both native and recombinant 12-Lipoxygenase.

Preparation

The monoclonal antibody ADG0043 (clone no. 13.4) is a murine monoclonal antibody recognizing human 12-Lipoxygenase. Mice were immunized with purified recombinant full-length human 12-LOX, expressed in the baculovirus expression system. The antibody has been purified from cell culture supernatant using Protein A affinity chromatography.

Presentation

Vial containing 250 µg purified antibody in PBS pH 7.4. The concentration is given on the vial label. Spin the vial briefly before opening.

Storage and Stability

Store the antibody at 2°-8°C. For long-term storage the antibody should be aliquoted and stored at –20°C or colder. It is recommended to avoid freeze-thaw cycles.

Applications

ELISA

The antibody can be used as capture or detection antibody in ELISAs. An antibody concentration of 1-10 µg/ml is recommended.

Specificity

The antibody is specific for 12-LOX/ALOX12. No cross-reactivity was observed against other members of the Lipoxygenase family (5-LOX, 15-LOX-1, 15-LOX-2, 12R-LOX, and eLOX3) when tested in ELISA.

References

1. Human platelet 12-lipoxygenase, new findings about its activity, membrane binding and low-resolution structure. Aleem AM, Jankun J, Dignam JD, Walther M, Kühn H, Svergun DI, Skrzypczak-Jankun E. *J Mol Biol.* 2008 Feb 8;376(1):193-209

2. The naturally occurring Q261R variant of the human platelet 12-lipoxygenase exhibits a reduced catalytic activity but unaltered reaction specificity, substrate binding behavior and membrane association. Aleem AM, Wells L, Jankun J, Walther M, Kühn H, Reinartz J, Skrzypczak-Jankun E. *J Mol Med*. 2009 accepted

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