3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-LXRβ (C-terminal)
produced in rabbit, IgG fraction of antiserum

Product Number **L5169**

Product Description

Anti-LXRβ (C-terminal) is produced in rabbit using as the immunogen a synthetic peptide corresponding to a sequence at the C-terminal of human LXRβ (GeneID 7376), conjugated to KLH. The corresponding sequence is highly conserved (single amino acid substitution) in rat and mouse LXRβ. Whole antiserum is purified using protein A immobilized on agarose to provide the IgG fraction of antiserum.

Anti-LXRβ (C-terminal) specifically recognizes human LXRβ. The antibody can be used for immunoblotting (~45 kDa). Detection of the LXRβ band by immunoblotting is specifically inhibited by the LXRβ immunizing peptide.

The liver X receptors (LXRs) are oxysterol-activated nuclear receptors that play an important role in the control cholesterol homeostasis.[1] Two different genes have been described, LXRα (NR1H3) and LXRβ (NR1H2). LXRα expression is restricted to macrophages and tissues involved in lipid metabolism, whereas LXRβ is more ubiquitous. LXRs heterodimerize with the retinoid X receptor (RXR) and bind to the LXR response element (LXRE). LXRs regulate cholesterol homeostasis by modulating the transcription of genes involved in its catabolism, storage, absorption and transport.[1] Activated LXRs are also potent inhibitors of inflammatory responses in macrophages, and reduce inflammation *in vivo*.[2] LXR expression and activation with LXRs ligands have also been shown to modulate atherosclerotic lesions.[3] LXRα/β-deficient mice show enhanced lipid-loaded foam cell accumulation. LXRs have been suggested to play an important role in Alzheimer's Disease (AD) pathogenesis.[4,5] The initiation and progression of AD has been linked to cholesterol metabolism and inflammation, processes that can be modulated by LXRs. Genetic knockout of either LXRα or LXRβ in APP/PS1 transgenic mice results in increased amyloid plaque load. Ligand activation of LXRs has been shown to attenuate the inflammatory response of primary mixed glial cultures to fibrillar amyloid β peptide (fAβ).

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working dilution of 1:1,000-1:2,000 is recommended using COS7 cells expressing human LXRβ.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Zelcer, N., and Tontonoz, P., *J. Clin. Investig.*, **116**, 607-614 (2006).
2. Joseph, S. et al., *Nat. Med.*, **9**, 213-219 (2003).
3. Tangirala, R.K. et al., *Proc. Natl. Acad. Sci. USA,* **99**, 11896-11901 (2002).
4. Zelcer, N. et al., *Proc. Natl. Acad. Sci. USA,* **104**, 10601-10606 (2007).
5. Sun, Y. et al., *J. Biol. Chem.,* **278**, 27688–27694 (2003).

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