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Product Information

Anti-LXRα (N-terminal)
produced in rabbit, affinity isolated antibody

Product Number **L5044**

Product Description

Anti-LXRα (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human LXRα (GeneID 10062), conjugated to KLH. The corresponding sequence has low homology (58% identity) to rat and mouse LXRα. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-LXRα (N-terminal) specifically recognizes human LXRα. The antibody can be used for immunoblotting (~50 kDa). Detection of the LXRα band by immunoblotting is specifically inhibited by the LXRα 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 knock-out 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.

Antibody concentration: ~1.5 mg/mL

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 concentration of 1-2 μg/mL is recommended using HEK-293T cells expressing human LXRα.

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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