LXR-β-LBD<sub>GST</sub> (residues 211-461)
Liver-X-Receptor, beta isoform, Ligand Binding Domain
human, recombinant, <i>E. coli</i>

<table>
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<tr>
<th>Cat. No.</th>
<th>Amount</th>
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<td>PR-835</td>
<td>5 µg</td>
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For in vitro use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

**Form**
Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 20% glycerol, 100 mM KCl, 0.2 mM EDTA and 1 mM DTT.

**Molecular Weight**
55.8 kDa

**Activity**
20 ng are sufficient for a gel-mobility shift assay and 100 ng are sufficient for a protein-protein interaction assay.

**Application**
LXR has been applied in DNA and protein-protein interaction assays.

**Purity**
≥90% by SDS-PAGE

**Description**
Liver X receptors (LXRs) are nuclear receptors that regulate the metabolism of cholesterol and bile acids. There are two subtypes of LXRs, LXR<sub>α</sub> and LXR<sub>β</sub>. LXR<sub>β</sub> is preferentially expressed in liver, small intestine, kidney and spleen. In contrast, LXR<sub>α</sub> expression is ubiquitous. The genomic structure and the promoter regions of the two LXR genes contain specific regulatory sites, which suggest that LXRs may have physiological roles in the immune system. Like other nuclear receptors, LXRs heterodimerize with retinoid X receptor (RXR) for function. LXRs are activated by naturally occurring oxysterols and regulate the expression of target genes, including ATP binding cassette transporter 1 (ABC1), ATP binding cassette transporter 8 (ABC8) and cholesterol ester transfer protein (CETP). LXR<sub>β</sub> expressed in livers of LXR<sub>α</sub> knockout mice does not compensate for the loss of LXR<sub>α</sub>. In addition, LXR<sub>β</sub>, but not LXR<sub>α</sub>, is also able to activate transcription of a reporter gene, which contains a specific direct repeat separated by 1 bp (DR1) element in the promoter, suggesting that LXR<sub>β</sub> may have different biological functions.

**Selected References:**
Venkateswaran et al. (2000) Human white/murine ABC8 mRNA levels are highly induced in lipid-loaded macrophages. A transcriptional role for specific oxysterols. J. Biol. Chem. 275:14700.
Peet et al. (1998) Cholesterol and bile acid metabolism are impaired in mice lacking the nuclear oxysterol receptor LXR alpha. Cell 93:693.
Willy et al. (1995) LXR, a nuclear receptor that defines a distinct retinoid response pathway. Genes Dev. 9:1033.
Song et al. (1994) Ubiquitous receptor: a receptor that modulates gene
**Data sheet**

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*activation by retinoic acid and thyroid hormone receptors. Proc. Natl. Acad. Sci. 91:10809.*