Recombinant RXR-LBD protein

Catalog No: 31135
Expressed In: *E. coli*

Quantity: 10 µg
Concentration: 0.4 µg/µl
Source: Human

Buffer Contents: 10 µg of Recombinant RXR-LBD protein in Dilution Buffer AM1 (20 mM Tris-Cl (pH 8), 20% glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA).

Background: The **Retinoid X receptor (RXR) ligand binding domain (LBD)** is a promiscuous heterodimerization domain for binding of RXR to many nuclear receptors, including thyroid hormone receptors (TRs), retinoic acid receptors (RARs), peroxisome proliferator-activated receptor, orphan nuclear receptors and oxysterol receptors. Binding of **RXR-LBD** to nuclear receptors is mediated by the identity box, a 40-amino acid subregion within the ligand binding domain. The LBD is responsible for mediating transcription through receptor homo- and heterodimerization. The specific function of the RXR-containing complexes in regulating transcription depends on the associated ligand. For example, hormone binding to the LBD of the RXR results a conformational change that affects the C-terminal transactivation helix H12 involved in transcriptional activation. RXR-LBD ligand binding triggers dissociation of corepressor and the recruitment of coactivators, such as members of the Src family kinases, NCOA2/GRIP1, and RAC3/AIB1 that, in turn, promote transcription of downstream targets.

Protein Details: Recombinant RXR-LBD (RXRa 198-462) is isolated from an *E. coli* strain that carries the coding sequence of the human RXR-LBD under the control of a T7 promoter (accession number NM 002957). The purified recombinant protein has an N-terminal His-Tag and is greater than 95% homogeneous and contains no detectable protease, DNase and RNase activity.

Application Notes: Recombinant RXR-LBD is suitable for *in vitro* transcription, ligand binding and protein-protein interaction assays. 20 ng is sufficient for *in vitro* transcription assays and 100 ng is sufficient for ligand binding and protein-protein interaction studies. The molecular weight of the protein is ~38 kDa. NOTE: The presence of Poly [d(I-C)] in buffers may affect protein functionality and should be avoided.

References:

This product was used in the following publications:

Pasutto, F., *et. al.* (2017). "Pseudoexfoliation syndrome-associated genetic variants affect transcription factor binding and alternative splicing of LOXL1." *Nat. Commun.* May 23; 8:15466. PMID: 28534485.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.