

## Active Recombinant Human RXRB, His-tagged

**Cat. No.** RXRB-8492H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Product Overview</b> | Recombinant Human RXRB, fused with His tag, was expressed in Sf21 Cells.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Source</b>           | Sf21 Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Description</b>      | <p>Retinoid X receptor (RXR) serves as a promiscuous heterodimerization partner for many nuclear receptors through the identity box, a 40-amino acid subregion within the ligand binding domain. RXR partners include thyroid hormone receptors (TRs), retinoic acid receptors (RARs), peroxisome proliferator-activated receptor, several constitutive active orphan nuclear receptors, oxysterol receptors, and constitutive androstane receptors. RXRs also form homodimers to mediate the effects of 9-cis-retinoic acid. Depending on these protein-protein interactions, RXR-containing complexes have distinct ligand-dependent and constitutive functions. RXRbeta was originally identified as a protein able to bind to the regulatory region II of the murine major histocompatibility complex (MHC) class I promoter and referred to as H2RIIBP. The human RXRbeta gene has been mapped to the short arm or centromeric region of chromosome 6 (6pter-q13) which also contains the MHC I locus. Two major RXRbeta isoforms in the mouse, designated RXRbeta1 and RXRbeta2 (GenBank accession numbers D21830 and D21831), differ in the N-terminal (A) domain with RXRbeta1 containing an extra 72 amino acids. These isoform mRNAs are transcribed from two CpG island promoters and the different N-terminal exons are spliced to exons common to both isoforms from the remainder of the gene. Although the two mouse RXR isoforms have been characterised in some detail,</p> |

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less information is available about their human counterparts . Since the expression of different RXR isoforms appears to be well conserved between species, each receptor isoform may hold a specific role in retinoid signalling. However, many RXR expression studies have not recognised the importance of establishing which RXR isoforms are expressed in a particular system. RXRbeta is predominantly involved in retinoid responses in the N-type SH SY 5Y and the S-type SH S EP neuroblastoma cells, both derivatives of a mixed phenotype neuroblastoma cell line.

**Form** 20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA

**Bio-activity** 1 unit equals 1 ng purified protein. 20 units (ng) are sufficient for an in vitro transcription assay and 100 units are sufficient for a protein-protein interaction assay.

**AA Sequence**

```
MSWAARPPFL PQRHAAGQCG PVGVRKEMHC GVASRWRRRR PWLDPAAAAA
AAVAGGEQQT PEPEPGEAGR DGMGDSGRDS RSPDSSSPNP LPQGVPPSP
PGPPLPPSTA PSLGGSGAPP PPPMPPPLG SPFPVISSSM GSPGLPPPAP
PGFSGPVSSP QINSTVSLPG GSGPPEDVK PPVLGVRGLH CPPPPGGPGA
GKRLCAICGD RSSGKHYGVY SCEGCKGFFK RTIRKDLTYS CRDNKDCTVD
KRQRNRCQYC RYQKCLATGM KREAVQEERQ RGKDKDGDGE GAGGAPEEMP
VDRILEAELA VEQKSDQGV E GPGGTGGSGS SPNDPVTNIC QAADKQLFTL
VEWAKRIPHF SSLPLDDQVI LLRAGWNELL IASFHSRSHD VRDGILLATG
LHVHRNSAHS AGVGAIFDRV LTELVSKMRD MRMDKTELGC LRAILFNPD
AKGLSNPSEV EVLREKVYAS LETYCKQKYP EQQGRFAKLL LRLPALRSIG
LKCLEHLFFF KLIGDTPIDT FLMEMLEAPH QLA
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**Purity** >95% as determined by SDS-PAGE

**Storage** -80 °C

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|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Concentration</b>       | 450 µg/ml                                                                                                                                                                                                                                                                                                                    |
| <b>Shipping</b>            | Dry Ice                                                                                                                                                                                                                                                                                                                      |
| <b>GENE INFORMATION</b>    |                                                                                                                                                                                                                                                                                                                              |
| <b>Gene Name</b>           | RXRB retinoid X receptor, beta [ Homo sapiens ]                                                                                                                                                                                                                                                                              |
| <b>Official Symbol</b>     | RXRB                                                                                                                                                                                                                                                                                                                         |
| <b>Synonyms</b>            | RXRB; retinoid X receptor, beta; retinoic acid receptor RXR-beta; H 2RIIBP; NR2B2; nuclear receptor subfamily 2 group B member 2; RCoR 1; retinoid X nuclear receptor beta; MHC class I promoter binding protein; DAUDI6; RCoR-1; H-2RIIBP; MGC1831;                                                                         |
| <b>Gene ID</b>             | 6257                                                                                                                                                                                                                                                                                                                         |
| <b>mRNA Refseq</b>         | NM_021976                                                                                                                                                                                                                                                                                                                    |
| <b>Protein Refseq</b>      | NP_068811                                                                                                                                                                                                                                                                                                                    |
| <b>MIM</b>                 | 180246                                                                                                                                                                                                                                                                                                                       |
| <b>UniProt ID</b>          | P28702                                                                                                                                                                                                                                                                                                                       |
| <b>Chromosome Location</b> | 6p21.3                                                                                                                                                                                                                                                                                                                       |
| <b>Pathway</b>             | Adipocytokine signaling pathway, organism-specific biosystem; Adipocytokine signaling pathway, conserved biosystem; Gene Expression, organism-specific biosystem; Generic Transcription Pathway, organism-specific biosystem; Non-small cell lung cancer, organism-specific biosystem; Non-small cell lung cancer, conserved |

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biosystem; Nuclear Receptor transcription pathway, organism-specific biosystem;

**Function**

9-cis retinoic acid receptor activity; ligand-activated sequence-specific DNA binding  
RNA polymerase II transcription factor activity; ligand-activated sequence-specific  
DNA binding RNA polymerase II transcription factor activity; metal ion binding; protein  
binding; protein heterodimerization activity; receptor activity; retinoic acid receptor  
binding; sequence-specific DNA binding; sequence-specific DNA binding transcription  
factor activity; steroid binding; steroid hormone receptor activity; thyroid hormone  
receptor binding; thyroid hormone receptor coactivator activity; transcription  
coactivator activity; transcription regulatory region DNA binding; vitamin D receptor  
binding; zinc ion binding;

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