Active Recombinant Human THRA, GST-tagged

Cat. No. THRA-1199H **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	E.coli
Description	Nuclear receptors form the largest known family of transcription factors and have a crucial role in nearly all aspects of vertebrate development and adult physiology by transducing the effects of hormones into transcriptional responses. The family is defined by two domains: (a) the central, highly conserved, DNA-binding domain (DBD) of approx. 66 amino acids, and (b) the C-terminal, structurally conserved, ligand-binding domain (LBD) of approx. 250 amino acids. The aminoterminal regions are least conserved among nuclear receptor sequences. This domain is highly divergent between TRα and TRβ isoforms, which suggests differential roles in transcriptional regulation. In addition, alternative splicing of the TRβ gene generates two isoforms, TRβ1 and TRβ2 with completely different amino-terminal domains. Unliganded TR inhibits the formation of a functional pre-initiation complex, through direct interaction with TBP and Transcription Factor IIB. In addition, in the absence of ligand TR has been shown to repress transcription through recruitment of a corepressor complex, which also includes Sin3A and histone deacetylase. Ligand binding releases the corepressor complex and recruits a coactivator complex that includes multiple histone acetyltransferases, including a steroid receptor family coactivator, p300/CREB-binding Protein-associated Factor (PCAF), and CREB-binding Protein (CBP). Recombinant GST-TR is isolated from an*E. coli*strain that carries the coding sequence of the human TRα1 under the control of a T7 promoter.

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Form	Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.
Purity	> 95% by SDS-PAGE.
Application	GST-TRα1 has been applied in DNA and protein-protein interaction assays.
Activity	100 ng are sufficient for a protein-protein interaction assay.
Usage	For in vitro use only.
Storage	Quality guaranteed for 12 months store at -80°C. Avoid freeze / thaw cycles.

GENE INFORMATION

Gene Name	THRA thyroid hormone receptor, alpha (erythroblastic leukemia viral (v-erb-a) oncogene homolog, avian) [Homo sapiens]
Synonyms	THRA; thyroid hormone receptor, alpha (erythroblastic leukemia viral (v-erb-a) oncogene homolog, avian);AR7; EAR7; ERBA; ERBA1; NR1A1; THRA1; THRA2; ERB-T-1; MGC43240; c-ERBA-1; MGC000261; thyroid hormone receptor, alpha; ERBA-related 7; triiodothyronine receptor; thyroid hormone receptor alpha; avian erythroblastic leukemia viral (v-erb-a) oncogene homolog; EAR-7.1/EAR-7.2; THRA3; C-erbA-alpha; EAR-7; OTTHUMP00000164470; c-erbA-1; Nuclear receptor subfamily 1 group A member 1
Gene ID	7067
mRNA Refseq	NM_003250
Protein Refseq	NP_003241

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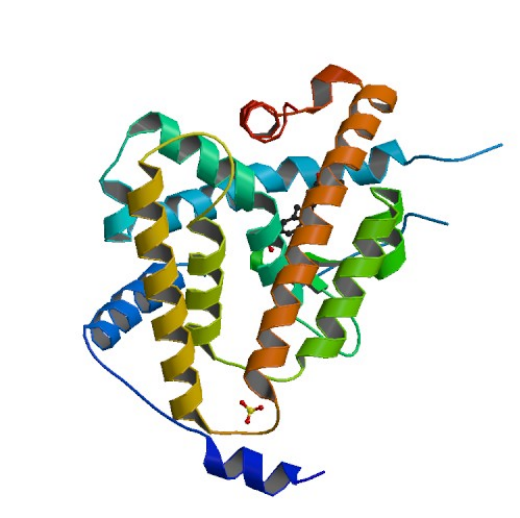
MIM	190120
UniProt ID	P10827
Chromosome Location	17q21.1
Pathway	Neuroactive ligand-receptor interaction
Function	protein binding; protein heterodimerization activity; protein homodimerization activity; single-stranded RNA binding; steroid hormone receptor activity; thyroid hormone receptor activity; transcription activator activity; transcription factor activity; transcription repressor activity; zinc ion binding; metal ion binding; promoter binding
PDB rendering based on 1nav.	

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