

## NR1A2/THRB recombinant protein

NR1A2/THRB Protein, Human, Recombinant (His Tag), HPLC-verified

CATALOG #  
AAA259197

HOST  
E coli

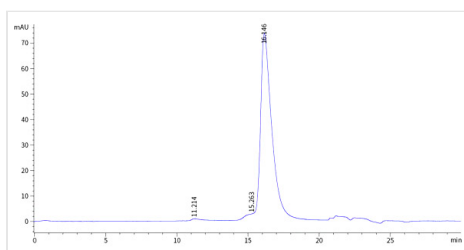
### PRODUCT SYNONYMS

NR1A2/THRB; NR1A2/THRB Protein; Human; Recombinant (His Tag); HPLC-verified; thyroid hormone receptor; beta; C-ERBA-2 Protein; C-ERBA-BETA Protein; ERBA2 Protein; GRTH Protein; NR1A2 Protein; PPTH Protein; THR1 Protein; THRB1 Protein; THRB2 Protein; NR1A2/THRB recombinant protein

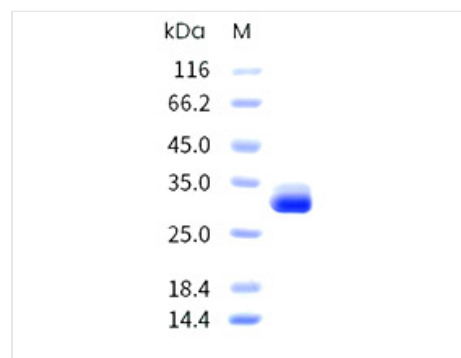
### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                             |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | E coli                                                                                                                                                                                                                                                                      |
| Purity/Purification     | >= 95% as determined by SDS-PAGE.<br>= 90% as determined by SEC-HPLC.                                                                                                                                                                                                       |
| Form/Format             | Lyophilized from sterile 50mM Tris, 1mM Tcep, pH 8.0.<br>Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.                                                                                                               |
| Species                 | Human                                                                                                                                                                                                                                                                       |
| Predicted N Terminal    | Met                                                                                                                                                                                                                                                                         |
| Endotoxin               | <1.0 EU per ug protein as determined by the LAL method.                                                                                                                                                                                                                     |
| Protein Construction    | A DNA sequence encoding the Human THRB (P10828-1)(Glu202-Asp461) was expressed, with a polyhistidine tag at the N-terminus.                                                                                                                                                 |
| Preparation and Storage | Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |

### IMAGES



Application Data



Application Data

ADDITIONAL INFORMATION

|                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for NR1A2/THRB recombinant protein | Thyroid hormone receptor beta (THRB), also known as TRbeta and NR1A2, belongs to the nuclear hormone receptor family. Featuring an N-terminal transactivation domain, a central DNA-binding domain, and a hormone/ligand-binding domain, THRB isoform 1/2 expression localizes predominately to the liver and pituitary, respectively. THRB regulates the feedback of T3-dependent thyrotropin-stimulating hormone (TSH) transcription in the pituitary by binding to thyroid hormone (TH) response elements present on promoters of TH-responsive genes. Located on chromosome 3p24, THRB gene mutation has been linked to autosomal dominant resistance to TH (RTH), which is characterized by goiter and elevated levels of T3, T4, and TSH. THRB is a known pharmacological target for the treatment of non-alcoholic steatohepatitis (NASH). THRB may be a target for future cancer therapies since its knockdown enhanced the viability of endometrial cancer cells and activated the mTOR-4EBP1/eIF4G pathway.                   |
| References                                                     | 1.T. Parry, D. Ledee, M.S. Willis, M.A. Portman, Chapter 10-Nuclear Receptors and the Adaptive Response of the Heart, Editor(s): Jonathan C. Schisler, Charles H. Lang, Monte S. Willis, Endocrinology of the Heart in Health and Disease, Academic Press, 2017, 2.Lai HP, Chen MH. Atrial Fibrillation with Heart Failure in a Case with Resistance to Thyroid Hormone Due to a Rare Thyroid Hormone Receptor beta Gene Mutation. Int J Mol Sci. 2022. 3.Ke S, et al. Thyroid hormone receptor beta sumoylation is required for thyrotropin regulation and thyroid hormone production. JCI Insight. 2021. 4.Krystian Jazdzewski, et al. Thyroid Hormone Receptor beta (THRB) Is a Major Target Gene for MicroRNAs Deregulated in Papillary Thyroid Carcinoma (PTC), The Journal of Clinical Endocrinology & Metabolism, 2011. 5.Ren B, et al. Thyroid Hormone Receptor beta Knockdown Reduces Suppression of Progestins by Activating the mTOR Pathway in Endometrial Cancer Cells. International Journal of Molecular Sciences. 2022. |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                                                                                                                   |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 40806162                                                                                                                                                                                                                                          |
| NCBI GeneID                      | 7068                                                                                                                                                                                                                                              |
| NCBI Accession #                 | NP_000452.2                                                                                                                                                                                                                                       |
| NCBI GenBank Nucleotide #        | NM_000461.4                                                                                                                                                                                                                                       |
| UniProt Accession #              | P10828; P37243; Q13986; Q3KP35; Q6WGL2; Q9UD41; B3KU79                                                                                                                                                                                            |
| Molecular Weight                 | 52,788 Da                                                                                                                                                                                                                                         |
| NCBI Official Full Name          | thyroid hormone receptor beta                                                                                                                                                                                                                     |
| NCBI Official Synonym Full Names | thyroid hormone receptor, beta                                                                                                                                                                                                                    |
| NCBI Official Symbol             | THRB                                                                                                                                                                                                                                              |
| NCBI Official Synonym Symbols    | GRTH; PRTH; THR1; ERBA2; NR1A2; THRB1; THRB2; C-ERBA-2; C-ERBA-BETA                                                                                                                                                                               |
| NCBI Protein Information         | thyroid hormone receptor beta; oncogene ERBA2; nuclear receptor subfamily 1 group A member 2; thyroid hormone nuclear receptor beta variant 1; thyroid hormone receptor, beta (erythroblastic leukemia viral (v-erb-a) oncogene homolog 2, avian) |
| UniProt Protein Name             | Thyroid hormone receptor beta                                                                                                                                                                                                                     |
| UniProt Gene Name                | THRB                                                                                                                                                                                                                                              |
| UniProt Synonym Gene Names       | ERBA2; NR1A2; THR1                                                                                                                                                                                                                                |
| UniProt Entry Name               | THB_HUMAN                                                                                                                                                                                                                                         |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.