

## Product datasheet for **SC300094**

### Thyroid Peroxidase (TPO) (NM\_000547) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Thyroid Peroxidase (TPO) (NM_000547) Human Untagged Clone
Tag:	Tag Free
Symbol:	Thyroid Peroxidase
Synonyms:	MSA; TDH2A; TPX
Mammalian Cell Selection:	Neomycin
Vector:	<u>PCMV6-Neo</u>
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_000547 edited  
AAGGCAATTAAGGCGCCCATTTTCAGAAGAGTTACAGCCGTGAAAATTACTCAGCAGTGCA  
GTTGGCTGAGAAGAGGAAAAAGAATGAGAGCGCTGGCTGTCTGTCTGCACGCTGGTT  
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CCCATCACAGGAGCTTGAACAACAGAGACCACCCAGATGGGGCGCCTCCAACACGGCC  
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CAACTCCCGGAGGAGGCCCGGCCGGCCGGGCACCGCCTGTCTGCCCTTCTACCGCTCT  
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TACATCCCAGGATCCTGGGACCGAGGCTTCCAGCAGTACGTGGTCCCTATGAAGGC  
TATGACTCCACCGCAACCCCACTGTGTCCAACGTGTTCTCCACAGCCGCTTCCGCTTC



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GGCCATGCCACGATCCACCCGCTGGTGAGGAGGCTGGACGCCAGCTTCCAGGAGCACCCC
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GATCAGCTGATGAACGAGGAGCTGACGGAAAGGCTCTTTGTGCTGTCGAATCCAGCACC
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GACTCGGAGCAGGAGAGTGTGGGATGGAAGGCCGGGATACTCACAGGCTGCCGAGAGCC
CTCTGAGGGCAAAGTGGCAGGACACTGCAGAACAGCTTCATGTTCCCAAATCACCGTAC
GACTCTTTTCCAAACACAGGCAAATCGGAAATCAGCAGGACGACTGTTTTCCCAAACAGG
GTAATCTAGTACCATGTCGTAGTACTCTCAGGCATGGATGAATAAATGTTATAGCTGT
AAAAAAAAAAAAAAAAAAAAAAAAAAAA

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- Restriction Sites:** Please inquire
- ACCN:** NM\_000547
- Insert Size:** 3100 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** The ORF of this clone has been fully sequenced and found to contain one SNP compared with NM\_000547.3.
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
  2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
  3. Close the tube and incubate for 10 minutes at room temperature.
  4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
  5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
- RefSeq:** [NM\\_000547.3](#), [NP\\_000538.3](#)

RefSeq Size:	3135 bp
RefSeq ORF:	2802 bp
Locus ID:	7173
UniProt ID:	<a href="#">P07202</a>
Cytogenetics:	2p25.3
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
Protein Pathways:	Autoimmune thyroid disease, Cytokine-cytokine receptor interaction, Hematopoietic cell lineage, Jak-STAT signaling pathway, Metabolic pathways, Tyrosine metabolism
Gene Summary:	<p>This gene encodes a membrane-bound glycoprotein. The encoded protein acts as an enzyme and plays a central role in thyroid gland function. The protein functions in the iodination of tyrosine residues in thyroglobulin and phenoxo-ester formation between pairs of iodinated tyrosines to generate the thyroid hormones, thyroxine and triiodothyronine. Mutations in this gene are associated with several disorders of thyroid hormonogenesis, including congenital hypothyroidism, congenital goiter, and thyroid hormone organification defect IIA. Multiple transcript variants encoding distinct isoforms have been identified for this gene, but the full-length nature of some variants has not been determined. [provided by RefSeq, May 2011]</p> <p>Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (a, also known as TPO1).</p>