

## Product datasheet for **SC307014**

### Thyroid Peroxidase (TPO) (NM\_175722) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Thyroid Peroxidase (TPO) (NM_175722) Human Untagged Clone
Tag:	Tag Free
Symbol:	TPO
Synonyms:	MSA; TDH2A; TPX
Vector:	<u>pCMV6 series</u>



[View online »](#)

**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_175722, the custom clone sequence may differ by one or more nucleotides

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ATGAGAGCGCTCGCTGTGCTGTCTGTACGCTGGTTATGGCCTGCACAGAAGCCTTCTTC
CCCTTCATCTCGAGAGGGAAAGAAGCTCTTTGGGGAAAGCCTGAGGAGTCTCGTGTCTCT
AGCGTCTTGGAGGAAAGCAAGCGCCTGGTGGACACCGCCATGTACGCCACGATGCAGAGA
AACCTCAAGAAAAGAGGAATCCTTTCTCCAGCTCAGCTTCTGTCTTTTTCCAAACTTCCT
GAGCCAAACAAGCGGAGTGATTGCCCGAGCAGAGATAATGGAACATCAATACAAGCG
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GAAGATCTGCTGAGCATATTGCAAACATGTCTGGATGTCTCCCTTACATGCTGCCCCCA
AAATGCCCAAACACTTGCTGGCGAACAATAACAGGCCCATCACAGGAGCTTGCAACAAC
AGAGACCACCCAGATGGGGCGCCTCCAACACGGCCCTGGCACGATGGCTCCCTCCAGTC
TATGAGGACGGCTTCAGTCAGCCCCGAGGCTGGAACCCCGGCTTCTGTACAACGGGTTCC
CCACTGCCCCCGTCCGGGAGGTGACAAGACATGTCATTCAAGTTTCAAATGAGGTTGTC
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ATCCCCAGGATCCTGGGACCCGAGGCCTTCCAGCAGTACGTGGGTCCCTATGAAGGCTAT
GACTCCACCGCAACCCCACTGTGTCCAACGTGTTCTCCACAGCCGCCTTCCGCTTCGGC
CATGCCACGATCCACCCGCTGGTGGAGGCTGGACGCCAGTTCAGGAGCACCACCGAC
CTGCCCGGGCTGTGGCTGCACCAGGCTTCTTCCAGCCATGGACATTACTCCGTGGAGGT
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CAGCTGATGAACGAGGAGCTGACGGAAAGGCTTTTGTGCTGTCCAATCCAGCACCTTG
GATCTGGCGTCCATCAACCTGCAGAGGGCCGGGACACGGGCTGCCAGGTTACAATGAG
TGGAGGGAGTTCTGCGGCCTGCCTCGCCTGGAGACCCCGCTGACCTGAGCACAGCCATC
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GTCTGGCTGGGAGGCTTAGCTGAAAACCTTCTCCACAGGCTCGGACAGGGCCCTGTTT
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AACAGCCACGTCTTACGGATGCACAGAGGCGTGAGCTGGAGAAGCACTCCCTGTCTCGG
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TTCCCCGAAGACTTTGAGTCTTGTGACAGCATCACTGGCATGAACCTGGAGGCTGGAGG
GAAACCTTCTCAAGACGACAAGTGTGGCTTCCAGAGAGCGTGGAGAATGGGGACTTT
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TGCAAAGATGTGAACGAGTGTGCAGACGGTGGCCACCCCCCTGCCACGCCTCTGCGAGG
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GATGGGAGAACCTGCGTAGACTCCGGGAGGCTCCCTCGGGTACTTGGATCTCCATGTGC
CTGGCTGCTCTGCTGATCGGAGGCTTCGAGGTCTCACCTCGACGGTGATTTGCAGGTGG
ACACGCACTGGCACTAAATCCACTGCCATCTCGGAGACAGGGCGGAGAACTCCCGAG
CTGAGATGCGGAAAGCACCAGGCCGTAGGGACCTCACCGCAGCGGGCCGAGCTCAGGAC
TCGGAGCAGGAGAGTGTGGATGGAAGGCCGGATACTCACAGGCTGCCGAGAGCCCTC
TGA

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**Restriction Sites:** Please inquire

**ACCN:** NM\_175722

**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).

<b>OTI Annotation:</b>	This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_175722.1</a> , <a href="#">NP_783653.1</a>
<b>RefSeq Size:</b>	2616 bp
<b>RefSeq ORF:</b>	2283 bp
<b>Locus ID:</b>	7173
<b>UniProt ID:</b>	<a href="#">P07202</a>
<b>Cytogenetics:</b>	2p25.3
<b>Protein Families:</b>	Druggable Genome, ES Cell Differentiation/IPS, Transmembrane
<b>Protein Pathways:</b>	Autoimmune thyroid disease, Cytokine-cytokine receptor interaction, Hematopoietic cell lineage, Jak-STAT signaling pathway, Metabolic pathways, Tyrosine metabolism
<b>Gene Summary:</b>	<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 phenoxy-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 (5) lacks an alternate in-frame exon in the central coding region, compared to variant 1, resulting in an isoform (e, also known as TPO5) that is shorter than isoform a. This variant lacks the 5'-most non-coding exon because of alternate splicing, the extension at the 5' end is uncertain.</p>