

## Product datasheet for **SC326854**

### Triosephosphate isomerase (TPI1) (NM\_001159287) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Triosephosphate isomerase (TPI1) (NM_001159287) Human Untagged Clone
Tag:	Tag Free
Symbol:	Triosephosphate isomerase
Synonyms:	HEL-S-49; TIM; TPI; TPID
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC326854 representing NM_001159287. Blue=Insert sequence Red=Cloning site Green=Tag(s)

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GCTCGTTTAGTGAACCGTCAGAATTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGGCGGAGGACGGCGAGGAGGCGGAGTTCACCTTCGCGGCGCTCTATATAAGTGGGCAGTGGCCGCGA
CTGCGCGCAGACTGACCTTCAGCGCCTCGGCTCCAGCGCCATGGCGCCCTCCAGGAAGTCTTCGTT
GGGGGAAACTGGAAGATGAACGGGCGGAAGCAGAGTCTGGGGGAGCTCATCGGCACTCTGAACGCGGCC
AAGGTGCCGGCCGACACCGAGGTGGTTTGTGCTCCCCCTACTGCCTATATCGACTTCGCCCGCAGAAAG
CTAGATCCAAGATTGCTGTGGCTGCGCAGAAGTCTACAAAGTACTAATGGGGCTTTACTGGGGAG
ATCAGCCCTGGCATGATCAAAGACTGCGGAGCCACGTGGGTGGTCTGGGCACTCAGAGAGAAGGCAT
GTCTTTGGGAGTCAGATGAGCTGATTGGCAGAAAGTGGCCATGCTCTGGCAGAGGGACTCGGAGTA
ATCGCCTGCATTGGGGAGAAGCTAGATGAAAGGGAAGCTGGCATCACTGAGAAGTTGTTTTCGAGCAG
ACAAAGGTCATCGCAGATAACGTGAAGGACTGGAGCAAGGTGCTCCTGGCCTATGAGCCTGTGTGGCC
ATTGTTACTGGCAAGACTGCAACACCCCAACAGGCCAGGAAGTACACGAGAAGCTCCGAGGATGGCTG
AAGTCCAACGTCTCTGATGCGGTGGCTCAGAGCACCCGTATCATTATGGAGGCTCTGTGACTGGGGCA
ACCTGCAAGGAGCTGGCCAGCCAGCCTGATGTGGATGGCTTCTGTGGTGGTCTTCCCTCAAGCCC
GAATTCGTGGACATCATCAATGCCAAACAATGA
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGCGC
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Restriction Sites:	Sgfl-MluI
ACCN:	NM_001159287
Insert Size:	861 bp



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<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a></p>
<b>OTI Annotation:</b>	<p>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.</p>
<b>Components:</b>	<p>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).</p>
<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_001159287.1</a>
<b>RefSeq Size:</b>	1460 bp
<b>RefSeq ORF:</b>	861 bp
<b>Locus ID:</b>	7167
<b>UniProt ID:</b>	<a href="#">P60174</a>
<b>Cytogenetics:</b>	12p13.31
<b>Protein Pathways:</b>	Fructose and mannose metabolism, Glycolysis / Gluconeogenesis, Inositol phosphate metabolism, Metabolic pathways
<b>MW:</b>	30.8 kDa

**Gene Summary:**

This gene encodes an enzyme, consisting of two identical proteins, which catalyzes the isomerization of glyceraldehydes 3-phosphate (G3P) and dihydroxy-acetone phosphate (DHAP) in glycolysis and gluconeogenesis. Mutations in this gene are associated with triosephosphate isomerase deficiency. Pseudogenes have been identified on chromosomes 1, 4, 6 and 7. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Apr 2009]

Transcript Variant: This variant (2) differs in the 5' UTR and coding region, compared to variant 1. The resulting isoform has a longer N-terminus compared to isoform 1. CCDS Note: This CCDS represents a TPI variant that uses an upstream promoter compared to the CCDS8566.1 representation. Data in PMIDs 4022011, 2925688, 2243103 and 10575546 support the presence of the internal promoter used by the CCDS8566.1 variant. The use of the upstream promoter is supported by human transcript data, including M10036.1, AL517115.3 and DB444195.1, as well as homologous transcripts. This longer transcript also uses an upstream start codon, resulting in an isoform that is 37 aa longer at the N-terminus compared to the CCDS8566.1 isoform. The sequence encoding the longer N-terminus is conserved in most mammalian species.