

## Product datasheet for **RC228949**

### TKTL1 (NM\_001145934) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TKTL1 (NM_001145934) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TKTL1
Synonyms:	TKR; TKT2
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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**ORF Nucleotide Sequence:**

>RC228949 representing NM\_001145934  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCTGTGCTGTTCTTCTACATCATGAGGTACAAGCAGTCAGATCCAGAGAATCCGGACAACGACCGAT  
 TTGTCCTCGCAAAGAGACTGTCGTTTGTGGATGTGGCAACAGGATGGCTCGGACAAGGACTGGGAGTTGC  
 ATGTGGAATGGCATATACTGGCAAGTACTTCGACAGGGCCAGCTACCGGGTGTCTGCTCATGAGTGT  
 GGCGAGTCCTCAGAAGGCTCTGTCTGGGAGGCAATGGCCTTTGCTTCTACTACAGTCTGGACAATCTTG  
 TGGCAATCTTTGATGTGAACCGCTGGGACACAGTGGTGCATTGCCCGCCGAGCACTGCATAAACATCTA  
 TCAGAGGCGCTGCGAAGCCTTTGGGTGGAACACTTATGTGGTGGACGGCCGGACGTGGAGGCACTGTGC  
 CAGGTATTCTGGCAGGCTTCTCAGGTGAAGCACAAGCCACTGCTGTGGTGGCCAAGACCTCAAGGGCC  
 GGGCACCCCAAGTATTGAGGATGCAGAAAGTTGGCATGCAAAGCCAATGCCGAGAGAAAGAGCAGATGC  
 CATTATCAAATTAATTGAGAGCCAGATACAGACCAGCAGGAATCTTGACCCACAGCCCCCATTGAGGAC  
 TCACCTGAAGTCAACATCACAGATGTAAGGATGACCTCTCCACCTGATTACAGAGTTGGTACAAGATAG  
 CTACTCGAAAGCATGCGGTCTGGCTCTGGCTAAGCTGGGCTACGCGAACAACAGAGTCTGTGTGCTGGA  
 TGGTGACACCAGGTACTACTTCTCTGAGATATTCAACAAGGAGTACCCTGAGCGCTTCATCGAGTGC  
 TTTATGGCTGAACAAAACATGGTGAGCGTGGCTCTGGGCTGTGCCTCCGTGGACGGACCATTGCTTTTG  
 CTAGCACCTTTGCTGCCTTTCTGACTCGAGCATTGATCACATCCGGATAGGAGGCTCGCTGAGAGCAA  
 CATCAACATTATGGTCCCCTGTGGGATCTGTTGGTGACGATGGTGTCTCCAGATGGCCCTGGAG  
 GATATAGCCATGTTCCGAACATTCCAAGTGCACGATCTTCTACCAACTGATGCCGTCTCCACGGAGC  
 ATGCTGTTGCTCTGGCAGCAATGCCAAGGGGATGTGCTTCAATTCGGACCACCCAGAACTATGGT  
 TATTTACACCCCAAGAAGCCTTTGAGATCGGACAGGCCAAGGTCTCCGCCACTGTGTCAAGTACAAG  
 GTCACAGTTATTGGAGCTGGAATTAAGTGTATGAAGCCTTAGCAGCTGCTGATGAGCTTTCGAAACAAG  
 ATATTTTATCCGTGTCATCGACCTGTTTACCATTAAACCTCTGGATGTCGCCACCATCGTCTCCAGTGC  
 AAAAGCCACAGAGGGCCGGATCATTACAGTGGAGGATCACTACCCGCAAGGTGGCATCGGGGAAGCTGTC  
 TGCGCAGCCGCTCCATGGATCCTGACATTCAGGTTCAATCGCTGGCAGTGTGGGAGTGGCCAGAGTG  
 GGAAGTCCGAGGAATTGCTGGATATGTATGGAATTAGTGCCAGACATATCATAGTGGCCGTGAAATGCAT  
 GTTGCTGAAC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC228949 representing NM\_001145934  
 Red=Cloning site Green=Tags(s)

MSVLFFYIMRYKQSDPENPDNDRFVLAKRLSFVDVATGWLQQLGVACGMAYTGKYFDRASYRVFCLMSD  
 GESSEGSVWEAMAFASYSLDNLVAIFDVNRLGHSGALPAEHCINIYQRRCEAFGWNTYVVDGRDVEALC  
 QVFWQASQVKKHPTAVVAKTFKGRGTPSIEDAESWHAKPMPRERADAIKLIQSQIQTSRNLDPQPIED  
 SPEVNIITDVRMTSPDPYRVGDKIATRACGLALAKLGYANNRVVLDGDTRYSTFSEIFNKEYPERFIEC  
 FMAEQNMVSVALGCASRGRTIAFASTFAAFLTRAFDHIRIGGLAESNINIGSHCGVSVGDDGASQMALE  
 DIAMFRTIPKCTIFYPTDAVSTEHAVALAANAKGMCFIRTRPETMVIYTPQERFEIGQAKVLRHCVSDK  
 VTVIGAGITVYEALAAADELSKQDIFIRVIDLFTIKPLDVATIVSSAKATEGRIITVEDHYPQGGIGEAV  
 CAAVSMDPDIQVHSLAVSGVPQSGKSEELLDMYGISARHIIVAVKCMLLN

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

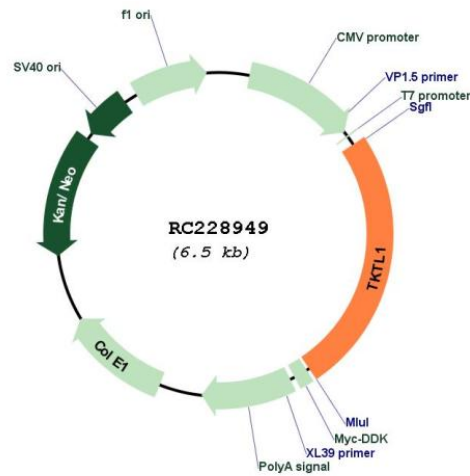
Sgfl-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


<b>ACCN:</b>	NM_001145934
<b>ORF Size:</b>	1620 bp
<b>OTI Disclaimer:</b>	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>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_001145934.2</a>
<b>RefSeq Size:</b>	2579 bp
<b>RefSeq ORF:</b>	1623 bp
<b>Locus ID:</b>	8277
<b>UniProt ID:</b>	<a href="#">P51854</a>
<b>Cytogenetics:</b>	Xq28
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Metabolic pathways, Pentose phosphate pathway
<b>MW:</b>	59.3 kDa
<b>Gene Summary:</b>	The protein encoded by this gene is a transketolase that acts as a homodimer and catalyzes the conversion of sedoheptulose 7-phosphate and D-glyceraldehyde 3-phosphate to D-ribose 5-phosphate and D-xylulose 5-phosphate. This reaction links the pentose phosphate pathway with the glycolytic pathway. Variations in this gene may be the cause of Wernicke-Korsakoff syndrome. Three transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Mar 2011]