

## Product datasheet for **RG228949**

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

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TKTL1 (NM_001145934) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TKTL1
Synonyms:	TKR; TKT2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG228949 representing NM\_001145934  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGGATGCTGAGGCGAGGGCTGAGTTCGCGGAGGAGGCCAGACCTGACAGGGGCACCTTGCAGGTGT  
 TTCAAGATATGGCCAGCCGCTTGCGAATCCATTCCATCAGGGCCACATGCTCCACGAGCTCCGGCCACCC  
 TACATCATGTAGCAGTCTTCTGAGATCATGTCTGTGCTGTTCTTCTACATCATGAGGTACAAGCAGTCA  
 GATCCAGAGAATCCGGACAACGACCCGATTTGTCCTCGAAAGAGACTGTCGTTTGTGGATGTGGCAACAG  
 GATGGCTCGGACAAGGACTGGGAGTTGCATGTGGAATGGCATATACTGGCAAGTACTTCGACAGGGCCAG  
 CTACCGGGTGTCTGCCTCATGAGTGTGGCGAGTCTCAGAAGGCTCTGTCTGGGAGGCAATGGCCTTT  
 GCTTCTACTACAGTCTGGACAATCTTGTGGCAACCTTTGATGTGAACCGCTGGACACAGTGGTGCAT  
 TGCCCGCCGAGCACTGCATAAACATCTATCAGAGGCGCTGCGAAGCCTTTGGGTGGAACACTTATGTGT  
 GGACGGCCGGGACGTGGAGGCACTGTGCCAGGTATTCTGGCAGGCTTCTCAGGTGAAGCACAGCCCACT  
 GCTGTGGTGGCAAGACCTTCAAGGGCCGGGCCACCCCAAGTATTGAGGATGCAGAAAGTTGGCATGCAA  
 AGCCAATGCCGAGAGAAAGAGCAGATGCCATTATCAAATTAATTGAGAGCCAGATACAGACCAGCAGGAA  
 TCTTGACCACAGCCCCCATTGAGGACTCACCTGAAGTCAACATCACAGATGTAAGGATGACCTCTCCA  
 CCTGATTACAGAGTTGGTACAAGATAGCTACTCGAAAGCATGCGGTCTGGCTCTGGCTAAGCTGGGCT  
 ACGCGAACACAGAGTCGTTGTGCTGGATGGTGACACCAGGACTCTACTTTCTCTGAGATATCAACAA  
 GGAGTACCCTGAGCGCTTATCGAGTGCCTTATGGCTGAACAAAACATGGTGAGCGTGGCTCTGGGCTGT  
 GCCTCCCGTGGACGGACCATTTGCTTTGCTAGCACCTTTGCTGCCTTTCTGACTCGAGCATTTGATCACA  
 TCCGGATAGGAGGCTCGCTGAGAGCAACATCAACATTATGGTTCCTGACTGTGGGTATCTGTTGGTGA  
 CGATGGTCTTCCAGATGGCCCTGGAGGATATAGCCATGTTCCGAACCATTCCCAAGTGCACGATCTTC  
 TACCCAATGATGCCGTCTCCACGGAGCATGCTGTTGCTCTGGCAGCAATGCCAAGGGGATGTGCTTCA  
 TTCGGACCACCCGACCAGAACTATGGTATTTACACCCACAAGAACGCTTTGAGATCGGACAGGCCAA  
 GGTCTCCGCACTGTGTGAGTACAAGGTACAGTATTGGAGCTGGAATTACTGTGTATGAAGCCTTA  
 GCAGCTGTGATGAGCTTTCGAAACAAGATATTTTATCCGTGTCATCGACCTGTTTACCATTAAACCTC  
 TGGATGTCGCCACCATCGTCTCCAGTGCAAAAGCCACAGAGGGCCGGATCATTACAGTGGAGGATCACTA  
 CCCGCAAGGTGGCATCGGGAAGCTGTCTGCCAGCCGCTCCATGGATCCTGACATTACAGTTCATTCCG  
 CTGGCAGTGTCCGGAGTCCCCAGAGTGGGAAGTCCGAGGAATTGCTGGATATGTATGGAATTAGTCCA  
 GACATATCATAGTGCCCTGAAATGCATGTTGCTGAAC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG228949 representing NM\_001145934  
 Red=Cloning site Green=Tags(s)

MADAEARAEFPEEARPDRGTLQVFQDMASRLRIHSIRATCSTSSGHPTSCSSSSEIMSVLFFYIMRYKQS  
 DPENPDNDRFVLAKRLSFVDVATGWLQGLGVACGMAYTGKYFDRASYRVFCLMSDGESEGSVWEAMAF  
 ASYSLDNLVATFDVNRGLHSGALPAEHCINIYQRRCEAFGWNTYVVDGRDVEALCQVFWQASQVKHKPT  
 AVVAKTFKGRGTPSIEDAESWHAKPMPRERADAIKLIQSQTSRNLDPQPIEDSPEVNITDVRMTSP  
 PDYRVGDKIATRKACGLALAKLGYANNRVVLDGDRYSTFSEIFNKEYPERFIECFMAEQNMVSVALGC  
 ASRGRTIAFASTFAAFLTRAFDHIRIGGLAESNINIIGSHCGVSVGDDGASQMALEDIAMFRTIPKCTIF  
 YPTDAVSTEHAVALAANAKGMCFIRTRPETMVIYTPQERFEIGQAKVLRHCVSDKVTVIGAGITVYEAL  
 AADELKQDIFIRVIDLFTIKPLDVATIVSSAKATEGRIITVEDHYPQGGIGEAVCAAVSMDPDIQVHS  
 LAVSGVPQSGKSEELLDMYGISARHIIIVAVKCMLLN

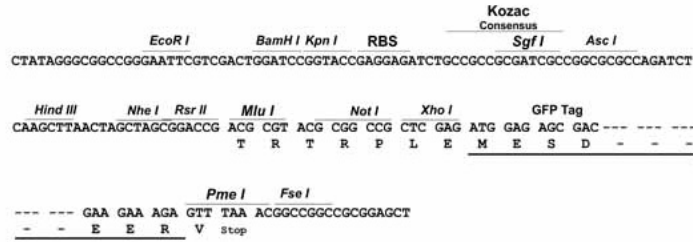
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

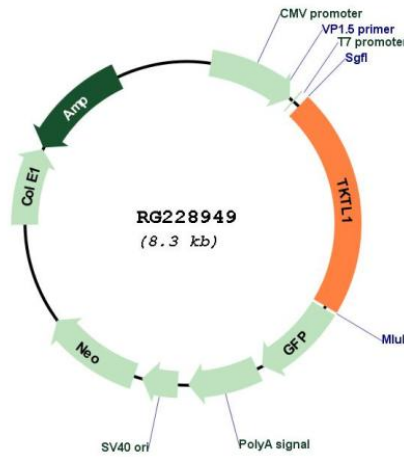
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_001145934

ORF Size: 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_001145934.1</a> , <a href="#">NP_001139406.1</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>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]