

## Product datasheet for **RG205557**

### TKTL2 (NM\_032136) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	TKTL2 (NM_032136) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TKTL2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG205557 representing NM\_032136  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGATGGCCAACGACGCCAAGCCCGACGTGAAGACCGTGCAGGTGCTGCGGGACACAGCCAAACCGCCTGC  
 GGATCCATTCCATCAGGGCCACGTGTGCCTCTGGTTCTGGCCAGCTCACGTCGTGCTGCAGTGCAGCGGA  
 GGTCTGTCTGTCTCTTCTTCCACACGATGAAGTATAAACAGACAGACCCAGAACACCCGGACAACGAC  
 CGGTTTCATCCTCTCCAGGGGACATGCTGCTCCTATCCTCTATGCTGCTTGGGTGGAGGTGGGTGACATCA  
 GTGAATCTGACTTGTGAACCTGAGGAACTTCACAGCGACTTGGAGAGACACCCACCCCGATTGCC  
 GTTTGTTGACGTGGCAACAGGGTCCCTAGGTGAGGATTAGGTAAGTACTGCATGTGGAATGGCTTATACTGGC  
 AAGTACCTTGACAAGGCCAGCTACCGGGTGTCTGCCTTATGGGAGATGGCGAATCCTCAGAAGGCTCTG  
 TGTGGGAGGCTTTTGTCTTTCCTCCACTACAACCTGGACAATCTCGTGGCGGCTTCGACGTGAACCG  
 CTTGGGACAAAGTGGCCCTGCACCCCTGAGCATGGCGCAGACATCTACCAGAATTGCTGTGAAGCCTTT  
 GGATGGAATACTTACTTGTGATGGCCATGATGTGGAGGCCCTTGCCAAAGCATTGTCGAAGCAAGTC  
 AAGTGAAGAACAAGCCTACTGCTATAGTTGCCAAGACCTCAAAGGTCGGGGTATTCCAATATTGAGGA  
 TGCAGAAAATTGGCATGGAAAGCCAGTGCCAAAAGAAAGAGCAGATGCAATTGTCAAATTAATTGAGAGT  
 CAGATACAGACCAATGAGAATCTCATACAAAATCGCCTGTGGAAGACTCACCTCAAATAAGCGTCACAG  
 ATATAAAAATGACCTCCCACATGCTTACAAAAGTTGGTGACAAGTAGCTACTCAGAAAACATATGGTTT  
 GGCTCTGGCTAAACTGGCCGTGCAAAATGAAAGAGTTATTGTTCTGAGTGGTGACACGATGAACTCCACC  
 TTTTCTGAGATATTCAGGAAAGAACCCTGAGCGTTTCATAGAGTGTATTATTGCTGAACAAAACATGG  
 TAAGTGTGGCACTAGGCTGTGCTACACGTGGTGAACCATTTGCTTTTGTGGTGTCTTTGCTGCTTTT  
 TACTAGACATTTCGATCAGCTCCGAATGGAGCCATTTCTCAAGCCAATATCAACCTTATTGGTTCCAC  
 TGTGGGTATCCACTGGAGAAGATGGAGTCTCCAGATGGCCCTGGAGGATCTAGCCATGTTCCGAAGCA  
 TTCCCAATTGACTGTTTTCTATCCAAGTATGATGATGCTCGACAGAGCATGCTATTTATCTAGCCGCCAA  
 TACCAAGGGAATGTGCTTCAATCGAACCCAGCAACCCAGAAAAGTGCAGTTATTTATACCCACAAGAAAAT  
 TTTGAGATTGGCCAGGCCAAGGTGGTCCGCCACGGTGTCAATGATAAAGTACAGTAATTGGAGCTGGAG  
 TACTCTCCATGAAGCCTTAGAAGCTGCTGACCATCTTCTCAACAAGGTATTTCTGTCCGTGCATCGA  
 CCCATTTACCATTAAACCCCTGGATGCCGCCACCATCATCTCCAGTGCAAAAAGCCACAGGCGCCGAGTT  
 ATCACAGTGGAGGATCACTACAGGGAAGGTGGCATTGGAGAAGCTGTTTGTGCAGCTGTCTCCAGGAGC  
 CTGATATCCTTGTTCATCAACTGGCAGTGTGAGGAGTGCCTCAACGTGGGAAAACAGTGAATTGCTGGA  
 TATGTTTGAATCAGTACCAGACACATTATAGCAGCCGTAACACTTACTTTAATGAAG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>RG205557 representing NM\_032136  
 Red=Cloning site Green=Tags(s)

MMANDAKPDVKTVQVLRDTANRLRIHSIRATCASGSQLTSCCSAAEVSVLFFHTMKYKQTDPEHPDND  
 RFILSRGHAAPILYAAWVEVGDISEDLLNLRKLSLDERHPTPRLPFVDVATGSLGQGLGTACGMAYTG  
 KYLDKASYRVFCLMGDGESEGSVWEAF AFASHYNLDNLVAVFDVNRLGQSGPAPLEHGADIYQNCCEAF  
 GWNTYLVDGHDVEALCQAFWQASQVKNKPTAIVAKTFKGRGIPNIEDAENWHGKVPKERADAIVKLIES  
 QIQTNENLIPKSPVEDSPQISVTDIKMTPHAYKVGDKIATQKTYGLALAKLGRANERIVLSGDTMNST  
 FSEIFRKEHPERFIECIIAEQNMVSVALGCATRGRITAFAGAF AAFTRAFDQLRMGAISQANINLIGSH  
 CGVSTGEDGVSQMALEDLAMFRSIPNCTVFYPSDAISTEHAHYLAANTKGMCFIRTSQPETAIVIYTPQEN  
 FEIGQAKVVRHGVDKVTVIGAVTLHEALEAADHL SQQGISVRVIDPFTIKPLDAATIISSAKATGGRV  
 ITVEDHYREGGIEAVCAAVSREPDILVHQLAVSGVPQRGKTSSELLDMFGISTRHIIAAVTLTLMK

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

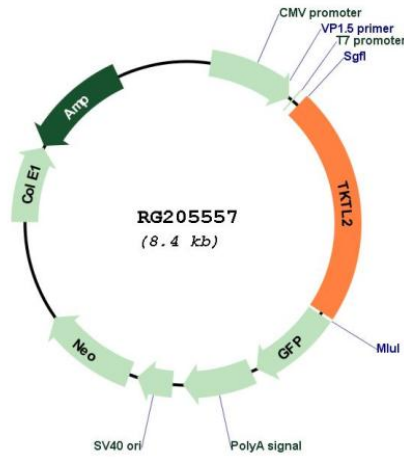
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_032136  
 ORF Size: 1878 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_032136.3</a> , <a href="#">NP_115512.2</a>
<b>RefSeq Size:</b>	2773 bp
<b>RefSeq ORF:</b>	1881 bp
<b>Locus ID:</b>	84076
<b>UniProt ID:</b>	<a href="#">Q9H0I9</a>
<b>Cytogenetics:</b>	4q32.2
<b>Protein Pathways:</b>	Metabolic pathways, Pentose phosphate pathway
<b>Gene Summary:</b>	Plays an essential role in total transketolase activity and cell proliferation in cancer cells; after transfection with anti-TKTL1 siRNA, total transketolase activity dramatically decreases and proliferation was significantly inhibited in cancer cells. Plays a pivotal role in carcinogenesis. [UniProtKB/Swiss-Prot Function]