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Product datasheet for RC203497

Transketolase (TKT) (NM_001064) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Transketolase (TKT) (NM_001064) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Transketolase
Synonyms:	HEL-S-48; HEL107; SDDHD; TK; TKT1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC203497 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGAGAGCTACCACAAGCCTGACCAGCAGAAGCTGCAGGCCTTGAAGGACACGGCCAACCGCCTACGTA
TCAGCTCCATCCAGGCCACCACTGCGGCGGGCTCTGGCCACCCCACGTCATGCTGCAGCGCCGCAGAGAT
CATGGCTGTCCTCTTTTTCCACACCATGCGCTACAAGTCCCAGGACCCCCGGAATCCGCACAATGACCGC
TTTGTGCTCTCCAAGGGCCATGCAGCTCCCATCCTCTACGCGGTCTGGGCTGAAGCTGGTTTCCTGGCCG
AGGCGGAGCTGCTGAACCTGAGGAAGATCAGCTCCGACTTGGACGGGCACCCGGTCCCGAAACAAGCTTT
CACCGACGTGGCCACTGGCTCCCTGGGCCAGGGCCTCGGGGCCGCTTGTGGGATGGCCTACACCGGCAAA
TACTTCGACAAGGCCAGCTACCGAGTCTATTGCTTGCTGGGAGATGGGGAGCTGTCAGAGGGCTCTGTAT
GGGAGGCCATGGCCTTCGCCAGCATCTATAAGCTGGACAACCTTGTGGCCATTCTAGACATCAATCGCCT
GGGCCAGAGTGACCCGGCCCCGCTGCAGCACCAGATGGACATCTACCAGAAGCGGTGCGAGGCCTTCGGT
TGGCATGCCATCATCGTGGATGGACACAGCGTGGAGGAGCTGTGCAAGGCCTTTGGCCAGGCCAAGCACC
AGCCAACAGCCATCATTGCCAAGACCTTCAAGGGCCGAGGGATCACGGGGGTAGAAGATAAGGAGTCTTG
GCATGGGAAGCCCCTCCCCAAAAACATGGCTGAGCAGATCATCCAGGAGATCTACAGCCAGATCCAGAGC
AAAAAGAAGATCCTGGCAACCCCTCCACAGGAGGACGCACCCTCAGTGGACATTGCCAACATCCGCATGC
CCAGCCTGCCCAGCTACAAAGTTGGGGACAAGATAGCCACCCGCAAGGCCTACGGGCAGGCACTGGCCAA
GCTGGGCCATGCCAGTGACCGCATCATCGCCCTGGATGGGGACACCAAAAATTCCACCTTCTCGGAGATC
TTCAAAAAGGAGCACCCGGACCGCTTCATCGAGTGCTACATTGCCGAGCAGAACATGGTGAGCATCGCGG
TGGGCTGTGCCACCCGCAACAGGACGGTGCCCTTCTGCAGCACTTTTGCAGCCTTCTTCACGCGGGCCTT
TGACCAGATTCGCATGGCCGCCATCTCCGAGAGCAACATCAACCTCTGCGGCTCCCACTGCGGCGTTTCC
ATCGGGGAAGACGGGCCCTCCCAGATGGCCCTAGAAGATCTGGCTATGTTTCGGTCAGTCCCCACATCAA
CTGTCTTTTACCCAAGTGATGGCGTTGCTACAGAGAAGGCAGTGGAACTAGCCGCCAATACAAAGGGTAT
CTGCTTCATCCGGACCAGCCGCCCAGAAAATGCCATCATCTATAACAACAATGAGGACTTCCAGGTCGGA
CAAGCCAAGGTGGTCCTGAAGAGCAAGGATGACCAGGTGACCGTTATCGGGGCTGGGGTGACCCTGCACG
AGGCCTTGGCCGCTGCCGAACTGCTGAAGAAAGAAAAGATCAACATCCGCGTGCTGGACCCCTTCACCAT
CAAGCCCCTGGACAGAAAACTCATTCTCGACAGCGCTCGTGCCACCAAGGGCAGGATCCTCACCGTGGAG
GACCATTATTATGAAGGTGGCATTGGTGAGGCTGTGTCCAGTGCAGTAGTGGGCGAGCCTGGCATCACTG
TCACCCACCTGGCAGTTAACCGGGTACCAAGAAGTGGGAAGCCAGCTGAGCTGCTGAAGATGTTTGGTAT
CGACAGGGATGCCATTGCACAAGCTGTGAGGGGCCTCATCACCAAGGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203497 protein sequence
Red=Cloning site Green=Tags(s)

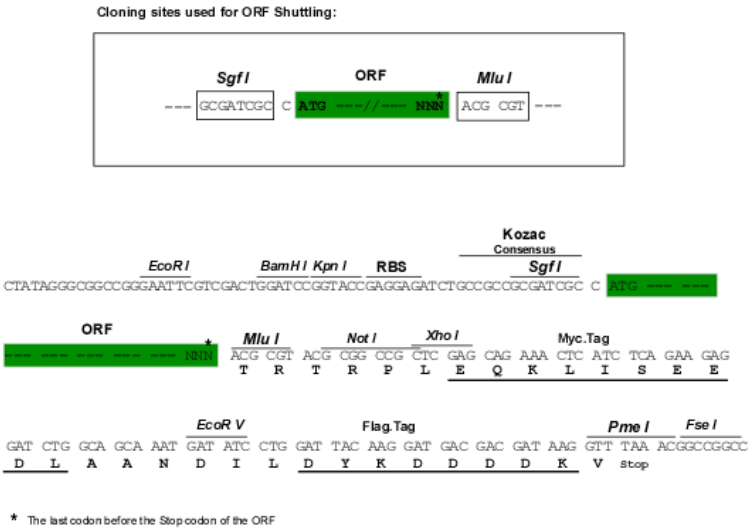
MESYHKPDQQKLQALKDTANRLRISSIQATTAAGSGHPTSCCSAAEIMAVLFFHTMRYKSQDPRNPHNDR
FVLSKGHAAPILYAVWAEAGFLAEAELLNLRKISSDLDGHPVPKQAFTDVATGSLGQGLGAACGMAYTGK
YFDKASYRVYCLLGDGELSEGSVWEAMAFASIYKLDNLVAILDINRLGQSDPAPLQHQMDIYQKRCEAFG
WHAIIVDGHSVEELCKAFGQAKHQPTAIIAKTFKGRGITGVEDKESWHGKPLPKNMAEQIIQEIYSQIQS
KKKILATPPQEDAPSVDIANIRMPSLPSYKVGDKIATRKAYGQALAKLGHASDRIIALDGDTKNSTFSEI
FKKEHPDRFIECYIAEQNMVSIAVGCATRNRTVPFCSTFAAFFTRAFDQIRMAAISESNINLCGSHCGVS
IGEDGPSQMALEDLAMFRSVPTSTVFYPSDGVATEKAVELAANTKGICFIRTSRPENAIIYNNNEDFQVG
QAKVVLKSKDDQVTVIGAGVTLHEALAAAELLKKEKINIRVLDPFTIKPLDRKLILDSARATKGRILTVE
DHYYEGGIGEAVSSAVVGEPGITVTHLAVNRVPRSGKPAELLKMFGIDRDAIAQAVRGLITKA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6154_h05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001064

ORF Size: 1869 bp

OTI Disclaimer: 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 custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

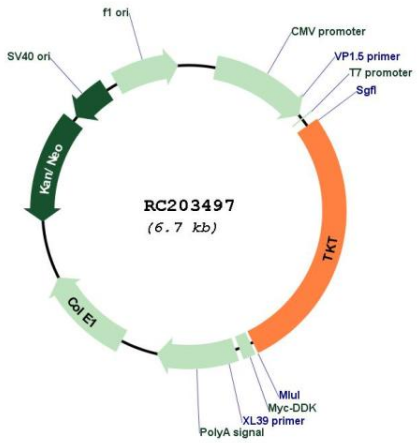
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

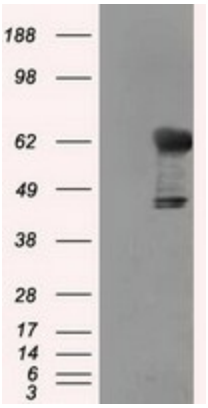
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_001064.4
RefSeq Size:	2179 bp
RefSeq ORF:	1872 bp
Locus ID:	7086
UniProt ID:	P29401
Cytogenetics:	3p21.1
Domains:	transketolase, transket_pyr, transketolase_C
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Pentose phosphate pathway
MW:	67.9 kDa
Gene Summary:	This gene encodes a thiamine-dependent enzyme which plays a role in the channeling of excess sugar phosphates to glycolysis in the pentose phosphate pathway. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Apr 2012]

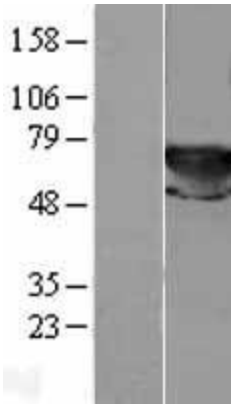
Product images:



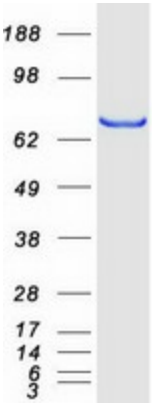
Circular map for RC203497



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TKT (Cat# RC203497, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-TKT(Cat# [TA500892]). Positive lysates [LY400434] (100ug) and [LC400434] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY427542]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC226037] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TKT protein (Cat# [TP303497]). The protein was produced from HEK293T cells transfected with TKT cDNA clone (Cat# RC203497) using MegaTran 2.0 (Cat# [TT210002]).