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Product datasheet for RC202777

TDO2 (NM_005651) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	TDO2 (NM_005651) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	TDO2
Synonyms:	HYPTRP; TDO; TO; TPH2; TRPO
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC202777 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGTGGGTGCCCATTTTTAGGAAACAACTTTGGATATACTTTTAAAAAACTCCCCGTAGAAGGCAGCG
AAGAAGACAAATCACAAACTGGTGTGAATAGAGCCAGCAAAGGAGGTCTTATCTATGGGAACTACCTGCA
TTTGGAAAAAGTTTTGAATGCACAAGAACTGCAAAGTGAAACAAAAGGAAATAAAATCCATGATGAACAT
CTTTTTATCATAACTCATCAAGCTTATGAACTCTGGTTTAAGCAAATCCTCTGGGAGTTGGATTCTGTTC
GAGAGATCTTTCAGAATGGCCATGTCAGAGATGAAAGGAACATGCTTAAGGTTGTTTCTCGGATGCACCG
AGTGTCAGTGATCCTGAAACTGCTGGTGCAGCAGTTTTCCATTCTGGAGACGATGACAGCCTTGGACTTC
AATGACTTCAGAGAGTACTTATCTCCAGCATCAGGCTTCCAGAGTTTGCAATTCCGACTATTAGAAAACA
AGATAGGTGTTCTTCAGAACATGAGAGTCCCTTATAACAGAAGACATTATCGTGATAACTTCAAAGGAGA
AGAAAATGAACTGCTACTTAAATCTGAGCAGGAAAAGACACTTCTGGAATTAGTGGAGGCATGGCTGGAA
AGAACTCCAGGTTTAGAGCCACATGGATTTAACTTCTGGGGAAAGCTTGAAAAAAATATCACCAGAGGCC
TGGAAGAGGAATTCATAAGGATTCAGGCTAAAGAAGAGTCTGAAGAAAAAGAGGAACAGGTGGCTGAATT
TCAGAAGCAAAAAGAGGTGCTACTGTCCTTATTTGATGAGAAACGTCATGAACATCTCCTTAGTAAAGGT
GAAAGACGGCTGTCATACAGAGCACTTCAGGGAGCATTGATGATATATTTTTACAGGGAAGAGCCTAGGT
TCCAGGTGCCTTTTCAGTTGCTGACTTCTCTTATGGACATAGATTCACTGATGACCAAATGGAGATATAA
CCATGTGTGCATGGTGCACAGAATGCTGGGCAGCAAAGCTGGCACCGGTGGTTCCTCAGGCTATCACTAC
CTGCGATCAACTGTGAGTGATAGGTACAAGGTATTTGTAGATTTATTTAATCTTTCAACATACCTGATTC
CCCGACACTGGATACCGAAGATGAACCCAACCATTCACAAATTTCTATATACAGCAGAATACTGTGATAG
CTCCTACTTCAGCAGTGATGAATCAGAT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC202777 protein sequence
Red=Cloning site Green=Tags(s)

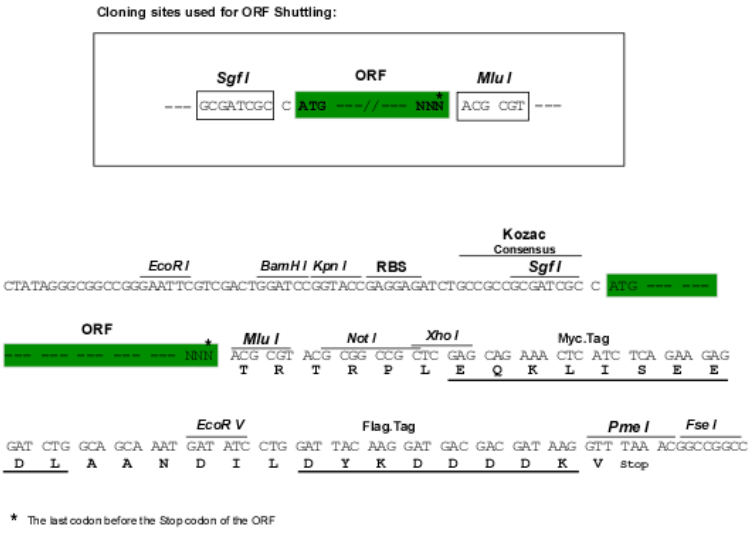
MSGCPFLGNNFGYTFKKLPVEGSEEDKSQTGVNRASKGGLIYGNYLHLEKVLNAQELQSETKGNKIHDEH
LFIITHQAYELWFKQILWELDSVREIFQNGHVRDERNMLKVVSRMHRVSVILKLLVQQFSILETMTALDF
NDFREYLSPASGFQSLQFRLLENKIGVLQNMRVPYNRRHYRDNFKGEENELLLKSEQEKTLLELVEAWLE
RTPGLEPHGFNFWGKLEKNITRGLEEEFIRIQAKEESEEKEEQVAEFQKQKEVLLSLFDEKRHEHLLSKG
ERRLSYRALQGALMIYFYREEPRFQVPFQLLTSLMDIDSLMTKWRYNHVCMVHRMLGSKAGTGGSSGYHY
LRSTVSDRYKVFVDLFNLSTYLIPRHWIPKMNPTIHKFLYTAEYCDSSYFSSDESD

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6153_a06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_005651

ORF Size: 1218 bp

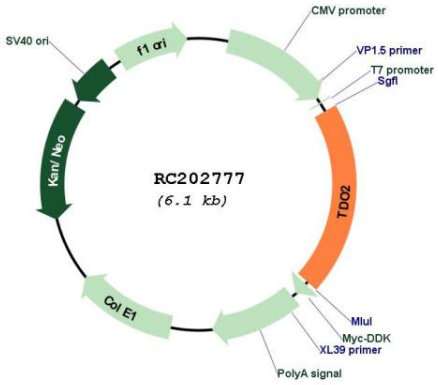
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

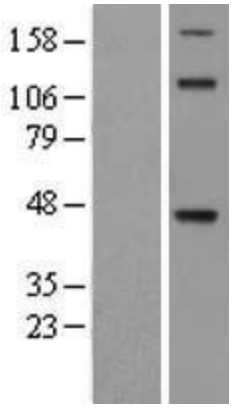
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

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_005651.4
RefSeq Size:	1703 bp
RefSeq ORF:	1221 bp
Locus ID:	6999
UniProt ID:	P48775
Cytogenetics:	4q32.1
Domains:	Trp_dioxygenase
Protein Pathways:	Metabolic pathways, Tryptophan metabolism
MW:	47.9 kDa
Gene Summary:	This gene encodes a heme enzyme that plays a critical role in tryptophan metabolism by catalyzing the first and rate-limiting step of the kynurenine pathway. Increased activity of the encoded protein and subsequent kynurenine production may also play a role in cancer through the suppression of antitumor immune responses, and single nucleotide polymorphisms in this gene may be associated with autism. [provided by RefSeq, Feb 2012]

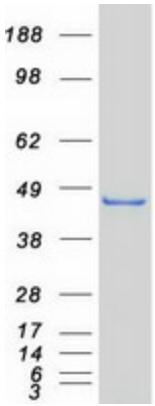
Product images:



Circular map for RC202777



Western blot validation of overexpression lysate (Cat# [LY401726]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202777 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TDO2 protein (Cat# [TP302777]). The protein was produced from HEK293T cells transfected with TDO2 cDNA clone (Cat# RC202777) using MegaTran 2.0 (Cat# [TT210002]).