

Product datasheet for **RC222594**

kynurenine 3 monooxygenase (KMO) (NM_003679) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	kynurenine 3 monooxygenase (KMO) (NM_003679) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KMO
Synonyms:	dj317G22.1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>RC222594 representing NM_003679
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGGACTCATCTGTCATTCAAAGGAAAAAGTAGCTGTCATTGGTGGTGGCTTGGTGGCTCATTACAAG
 CATGCTTTCTTGCAAAGAGGAATTTCCAGATTGATGTATATGAAGCTAGGGAAGATACTCGAGTGGCTAC
 CTTACACGTGGAAGAAGCATTAACTTAGCCCTTCTCATAGAGGACGACAAGCCTTGAAAGCTGTTGGC
 CTGGAAGATCAGATTGTATCCCAAGGATTCCCATGAGAGCAAGAATGATCCACTCTCTTCAGGAAAA
 AGTCTGCAATTCCTATGGGACAAAGTCTCAGTATATTCTTTCTGAAGCAGAGAAAACTAAACAAGGA
 TCTATTGACTGCTGCTGAGAAATACCCCAATGTGAAAATGCACTTTAACCCACAGGCTGTTGAAATGTAAT
 CCAGAGGAAGGAATGATCACAGTCTGGATCTGACAAAGTCCCAAAGATGTCATTGTGACCTCATTG
 TAGGATGTGATGGAGCCTATTCAACTGTCAGATCTCACCTGATGAAGAAACCTCGCTTTGATTACAGTCA
 GCAGTACATTCTCATGGGTACATGGAGTTGACTATTCCACCTAAGAACGGAGATTATGCCATGGAACCT
 AATTATCTGCATATTTGGCCTAGAAATACCTTTATGATGATTGCACTTCCTAACATGAACAAATCATTCA
 CATGTACTTTGTTTCATGCCCTTTGAAGAGTTTGA AAAACTTCTAACCCAGTAAATGATGTGGTAGATTTCTT
 CCAGAAATACTTTCCAGATGCCATCCCTCTAATTGGAGAGAAACTCCTAGTGCAAGATTTCTTCTGTTG
 CCTGCCAGCCCATGATATCTGTAAAGTCTCTTCACTTTAAATCTCACTGTGTACTGCTGGGAG
 ATGCAGCTCATGCTATAGTGCCGTTTTTTGGGCAAGGAATGAATGCGGGCTTTGAAGACTGCTTGGTATT
 TGATGAGTTAATGGATAAATTCAGTAACGACCTTAGTTTGTGTCTTCTGTGTTCTCAAGATTGAGAATC
 CCAGATGATCACGCGATTTCCAGACCTATCCATGTACAATTACATAGAGATGCGAGCACATGTCAACTCAA
 GCTGGTTCATTTTTTCAGAAGAACATGGAGAGATTTCTTCATGCGATTATGCCATCGACCTTTATCCCTCT
 CTATAACAATGGTCACTTTTTCCAGAATAAGATACCATGAGGCTGTGCAGGTTGGCATTGGCAAAAAAAG
 GTGATAAACAAAGGACTCTTTTTCTGGGATCACTGATAGCCATCAGCAGTACCTACCTACTTATACACT
 ACATGTACCACGATCTTCTCTGCTTGAAGAACCATGGAACCTGGATAGCTCACTTCCGGAATACAAC
 ATGTTTCCCCGCAAGGCCGTGGACTCCCTAGAACAAATTTCCAATCTCATTAGCAGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC222594 representing NM_003679
 Red=Cloning site Green=Tags(s)

MDSSVIQRKKVAVIGGGLVGSQACFLAKRNFQIDVYEAREDTRVATFTRGRSINLALSHRGRQALKAVG
 LEDQIVSQGIPMRARMIHSLSGKKSAPYGTGSQYILSVSRENLNKDLLTAAEKYPNVKMHFNHLLKCN
 PEEGMITVLGSDKVPKDVTCDLIVGCDGAYSTVRSHLMKKPRFDYSQQYIPHYMELTIPPKNQDYAMEP
 NYLHIWPRNTFMMIALPNMNSFTCTLFMPFEFEKLLTSDVVDFFQKYFPDAIPLIGEKLLVQDFLL
 PAQPMISVKCSSFHFKSHCVLLGDAAHAIVPFFGQGMNAGFEDCLVDFELMDKFSNDLSLCLPVFSRLRI
 PDDHAISDLSMYNYIEMRAHVNSWFIFQKNMERFLHAIMPSTFIPLYTMVTFSRIRYHEAVQRWHWQKK
 VINKGLFFLGLIAISSYLLIHYSRPSFLCLRRPWNWIAHFRNTTCFPAKAVDSLEQISNLISR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6161_f05.zip

Restriction Sites:

SgfI-MluI

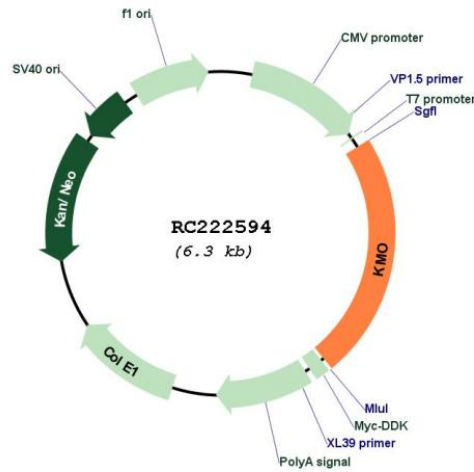
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN: NM_003679

ORF Size: 1458 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.

RefSeq: [NM_003679.5](#)

RefSeq Size: 4992 bp

RefSeq ORF: 1461 bp

Locus ID: 8564

UniProt ID: [O15229](#)

Cytogenetics: 1q43

Domains: Monooxygenase

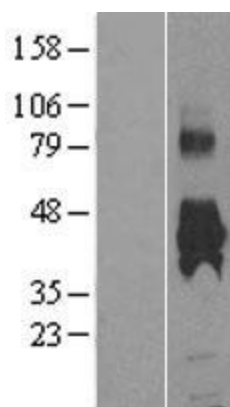
Protein Families: Druggable Genome

Protein Pathways: Metabolic pathways, Tryptophan metabolism

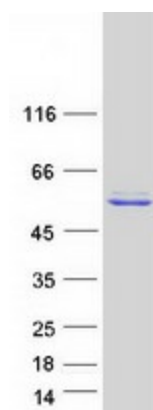
MW: 55.6 kDa

Gene Summary: This gene encodes a mitochondrion outer membrane protein that catalyzes the hydroxylation of L-tryptophan metabolite, L-kynurenine, to form L-3-hydroxykynurenine. Studies in yeast identified this gene as a therapeutic target for Huntington disease. [provided by RefSeq, Oct 2011]

Product images:



Western blot validation of overexpression lysate (Cat# [LY401216]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222594 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KMO protein (Cat# [TP322594]). The protein was produced from HEK293T cells transfected with KMO cDNA clone (Cat# RC222594) using MegaTran 2.0 (Cat# [TT210002]).