

Product datasheet for **RC204649**

Arginase 1 (ARG1) (NM_000045) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Arginase 1 (ARG1) (NM_000045) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Arginase 1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204649 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCGCCAAGTCCAGAACCATAGGGATTATTGGAGCTCCTTTCTCAAAGGGACAGCCACGAGGAGGGG
TGAAGAAGGCCCTACAGTATTGAGAAAGGCTGGTCTGCTTGAGAACTTAAAGAACAAGAGTGTGATGT
GAAGGATTATGGGGACCTGCCCTTTGCTGACATCCCTAATGACAGTCCCTTTCAAATTGTGAAGAATCCA
AGGTCTGTGGGAAAAGCAAGCGAGCAGCTGGCTGGCAAGGTGGCAGAAGTCAAGAAGAACGGAAGAATCA
GCCTGGTGTGGCGGAGACCACAGTTTGGCAATTGGAAGCATCTCTGGCCATGCCAGGGTCCACCCTGA
TCTTGGAGTCATCTGGGTGGATGCTCACACTGATATCAACACTCCACTGACAACCACAAGTGAAACTTG
CATGGACAACCTGTATCTTTCTCCTGAAGGAACTAAAAGGAAAGATTCCCGATGTGCCAGGATTCTCCT
GGGTGACTCCCTGTATATCTGCCAAGGATATTGTGTATATTGGCTTGAGAGACGTGGACCCTGGGGAACA
CTACATTTGAAAACCTAGGCATTAATACTTTCAATGACTGAAGTGGACAGACTAGGAATTGGCAAG
GTGATGGAAGAACTCAGCTATCTACTAGGAAGAAAGAAAAGGCAATTCATCTAAGTTTTGATGTTG
ACGGACTGGACCCATCTTTCACACCAGCTACTGGCACACCAGTCGTGGGAGGTCTGACATACAGAGAAGG
TCTCTACATCACAGAAGAAATCTACAAAACAGGGCTACTCTCAGGATTAGATATAATGGAAGTGAACCCA
TCCCTGGGAAGACACCAGAAGAAGTAACCGAACAGTGAACACAGCAGTTGCAATAACCTTGGCTTGT
TCGGACTTGTCTGGGAGGTAATCACAAGCCTATTGACTACCTTAACCCACCTAAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC204649 protein sequence
Red=Cloning site Green=Tags(s)

MSAKSRTIGIIGAPFSKGQPRGGVEEGPTVLRKAGLLEKLKEQECVDKDYGDLPFADIPNDSPFQIVKNP
 RSVGKASEQLAGKVAEVKKNGRISLVLGGDHS LAIGSISGHARVHPDLGVIWVDAHTDINTPLTTTSGNL
 HGQPVSFLLKELKGIKIPDVPGFVSWVTPCISAKDIVYIGLRDVPGEHYILKTLGIKYFSMTEVDRLGIGK
 VMEETLSYLLGRKKRPIHLSFDVDGLDPSFTPATGTPVVGGLTYREGLYITEEIKYKGLLSGLDIMEVNP
 SLGKTPEEVTRTVNTAVAITLACFGLAREGNHKPIDYLNPPK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6068_c05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_000045

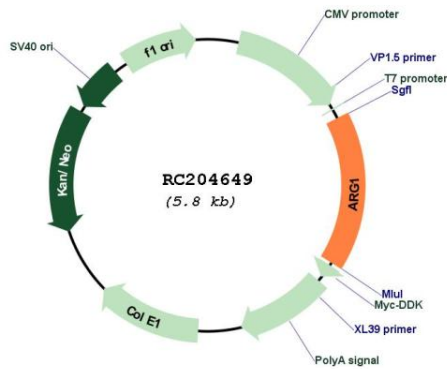
ORF Size: 966 bp

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.

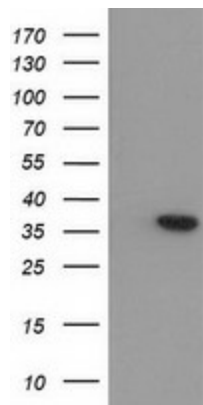
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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:	<ol style="list-style-type: none">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_000045.4
RefSeq Size:	1475 bp
RefSeq ORF:	969 bp
Locus ID:	383
UniProt ID:	P05089
Cytogenetics:	6q23.2
Domains:	arginase
Protein Families:	Druggable Genome
Protein Pathways:	Arginine and proline metabolism, Metabolic pathways
MW:	34.7 kDa
Gene Summary:	Arginase catalyzes the hydrolysis of arginine to ornithine and urea. At least two isoforms of mammalian arginase exist (types I and II) which differ in their tissue distribution, subcellular localization, immunologic crossreactivity and physiologic function. The type I isoform encoded by this gene, is a cytosolic enzyme and expressed predominantly in the liver as a component of the urea cycle. Inherited deficiency of this enzyme results in argininemia, an autosomal recessive disorder characterized by hyperammonemia. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Sep 2011]

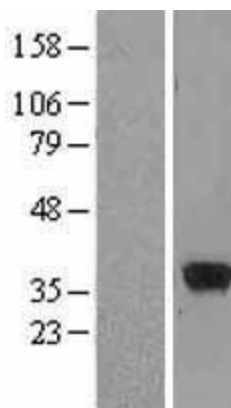
Product images:



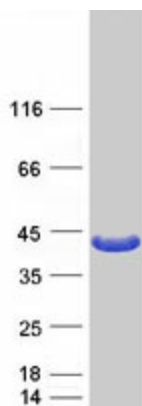
Circular map for RC204649



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ARG1 (Cat# RC204649, 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-ARG1 (Cat# [TA502413]). Positive lysates [LY424951] (100ug) and [LC424951] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424951]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204649 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ARG1 protein (Cat# [TP304649]). The protein was produced from HEK293T cells transfected with ARG1 cDNA clone (Cat# RC204649) using MegaTran 2.0 (Cat# [TT210002]).