

## Product datasheet for **RC218358**

### Monoacylglycerol Lipase (MGLL) (NM\_007283) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Monoacylglycerol Lipase (MGLL) (NM_007283) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Monoacylglycerol Lipase
Synonyms:	HU-K5; HUK5; MAGL; MGL
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC218358 representing NM_007283 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGAACAGGACCTGAAGACCCCTCCAGCATGCCAGAGGAAAGTCCCCAGGCGGACCCCGCAGAGCA  
TTCCCTACCAGGACCTCCCTCACCTGGTCAATGCAGACGGACAGTACCTTTCTGCAGGACTGGAAACC  
CACAGGCACACCAAGGCCCTCATCTTTGTGTCCCATGGAGCCGGAGAGCACAGTGGCCGCTATGAAGAG  
CTGGCTCGGATGCTGATGGGGCTGGACCTGCTGGTGTTCGCCACGACCATGTTGGCCACGGACAGAGCG  
AAGGGGAGAGGATGGTAGTGTCTGACTTCCACGTTTTTCGTCAGGGATGTGTTGCAGCATGTGGATCCAT  
GCAGAAAGACTACCTGGGCTTCTGTCTTCTTCTGGGCCACTCCATGGGAGGCCCATCGCCATCCTC  
ACGGCCGAGAGAGGCCGGCCACTTCGCCGCGCATGGTACTCATTTCGCCTCTGGTTCTTGCCAATCCTG  
AATCTGCAAACTTTCAAGGTCCTTGCTGCGAAAGTGCTCAACCTTGCTGCCAACTTGTCCTCGG  
GCCCATCGACTCCAGCGTGCTCTCTCGGAATAAGACAGAGGTCGACATTTATAACTCAGACCCCTGATC  
TGCCGGGCAGGGCTGAAGGTGTGCTTCGGCATCCAAGTCTGATGATGCGGTCACGGGTGGAGCGGCC  
TCCCAAGCTGACTGTGCCCTTCTGTCTCCAGGGCTCTGCCGATCGCCTATGTGACAGCAAAGGGGC  
CTACCTGCTCATGGAGTTAGCCAAGAGCCAGGACAAGACTCTCAAGATTTATGAAGTGCCTACCATGTT  
CTCCACAAGGAGCTTCTGAAGTCACCAACTCCGCTTCCATGAAATAAACATGTGGTCTCTCAAAGGA  
CAGCCACGGCAGGAAGTCCGTCACCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC218358 representing NM\_007283  
 Red=Cloning site Green=Tags(s)

METGPEDPSSMPEESSPRRTPQSIPIYQDLPHLVNADGQYLFCRYWKPTGTPKALIFVSHGAGEHSGRYEE  
 LARMLMGLDLLVFAHDHVGHGQSEGERMVVSDFHVFVRDVLQHVDMSMQKDYPGLPVFLLGHSMGGAIAIL  
 TAAERPGHFAGMVLISPLVLANPESATTFKVLAAKVLNLVLPNLSLGPIDSSVL SRNKTEVDIYNSDPLI  
 CRAGLKVCFGIQLLNAVS RVERALPKL TVPFLL LQGSADRLCDSKGAYLLMELAKSQDKTLKIYEGAYHV  
 LHKELPEVTNSVFHEINMWVSQRTATAGTASPP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6172\\_h07.zip](https://cdn.origene.com/chromatograms/mk6172_h07.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\_007283

**ORF Size:** 939 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\\_007283.6](#)

**RefSeq Size:** 4617 bp

**RefSeq ORF:** 942 bp

**Locus ID:** 11343

**UniProt ID:** [Q99685](#)

**Cytogenetics:** 3q21.3

**Domains:** abhydrolase

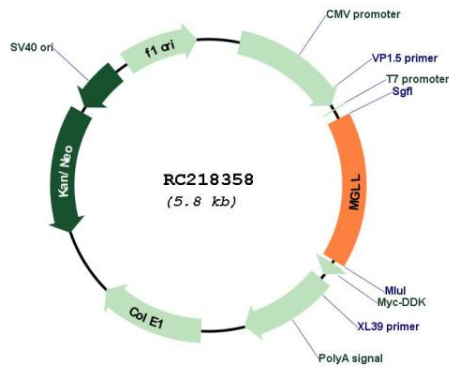
**Protein Families:** Druggable Genome, Protease

**Protein Pathways:** Glycerolipid metabolism, Metabolic pathways

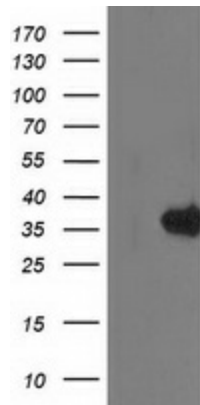
**MW:** 34.1 kDa

**Gene Summary:** This gene encodes a serine hydrolase of the AB hydrolase superfamily that catalyzes the conversion of monoacylglycerides to free fatty acids and glycerol. The encoded protein plays a critical role in several physiological processes including pain and nociception through hydrolysis of the endocannabinoid 2-arachidonoylglycerol. Expression of this gene may play a role in cancer tumorigenesis and metastasis. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Feb 2012]

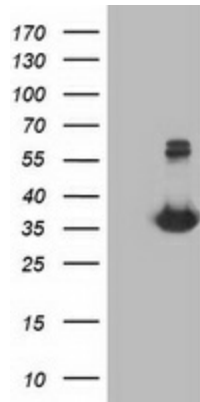
Product images:



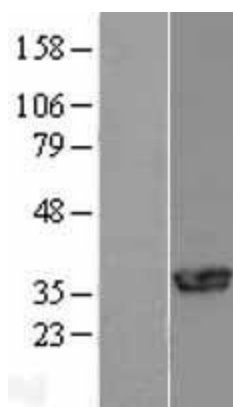
Circular map for RC218358



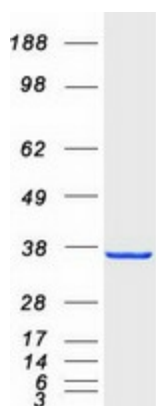
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY MGLL (RC218358, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MGLL ([TA502886]). Positive lysates [LY402124] (100ug) and [LC402124] (20ug) can be purchased separately from OriGene.



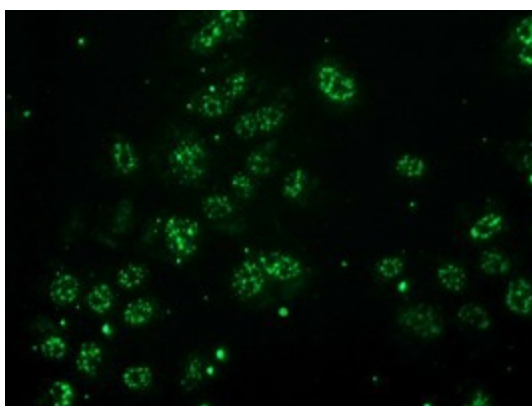
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY MGLL (Cat# RC218358, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-MGLL (Cat# [TA502932]). Positive lysates [LY402124] (100ug) and [LC402124] (20ug) can be purchased separately from OriGene.



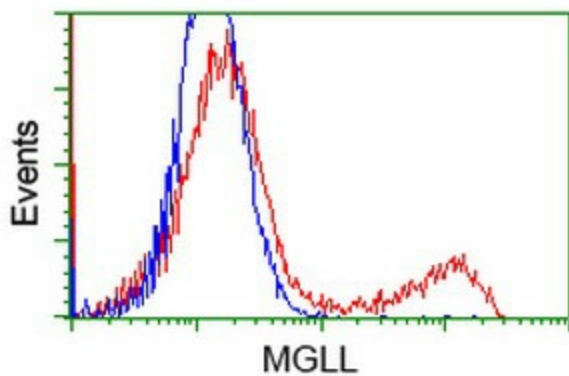
Western blot validation of overexpression lysate (Cat# [LY402124]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218358 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified MGLL protein (Cat# [TP318358]). The protein was produced from HEK293T cells transfected with MGLL cDNA clone (Cat# RC218358) using MegaTran 2.0 (Cat# [TT210002]).



Anti-MGLL mouse monoclonal antibody ([TA502886]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY MGLL (RC218358).



HEK293T cells transfected with either RC218358 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-MGLL antibody ([TA502886]), and then analyzed by flow cytometry.