

Product datasheet for **MR229634**

Ager (NM_001271423) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Ager (NM_001271423) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Ager
Synonyms: RAGE
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >MR229634 representing NM_001271423
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGC**C

ATGCCAGCGGGGACAGCAGCTAGAGCCTGGGTGCTGGTCTTGCTCTATGGGGAGCTGTAGCTGGTGGTC
AGAACATCACAGCCCGGATTGGAGAGCCACTTGTGCTAAGCTGTAAGGGGGCCCCAAGAAGCCGCCCA
GCAGCTAGAATGAAACTGGTCTCTCTCCCCAGGGAGGCCCTGGGACAGCGTGGCTCGAATCCTCCCC
AATGGTTCCTCCTCCTCCAGCCACTGGAATTGTCGATGAGGGGACTTCCGGTGTGCGCAACTAACA
GGCGAGGGAAGGAGGTCAAGTCCAACACCGAGTCCGAGTCTACCGATTCTGGGAAGCCAGAAATTTG
GGATCCTGCCTCTGAACTCACAGCCAGTGTCCCTAATAAGGTGGGGACATGTGTGTCTGAGGGAAGCTAC
CCTGCAGGGACCCTTAGCTGGCACTTAGATGGGAACTTCTGATTCCCGATGGCAAAGAAACACTCGTGA
AGGAAGAGACCAGGAGACACCCTGAGACGGGACTCTTACACTGCGGTGACAGCTGACAGTATCCCCAC
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ACAGCCCCATCCAACCTCCGAGTCAGGGAGCCTGGGCCCCAGAGGGCATTGAGTGTGGTTGAGCCTG
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GGTCCACTGGATAAAGGATGGTGCACCCTTGCCCTGGCTCCCAGCCCTGTGCTGCTCCTCCTGAGGTG
GGGCACGAGGATGAGGGCACCTATAGCTGCGTGGCCACCCACCCTAGCCACGGACCTCAGGAAAGCCCTC
CTGTGAGCATCAGGGTACAGGCTCTGTGGGTGAGTCTGGGCTGGGTACGCTAGCCCTGGCCTTGGGGAT
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CGGAGATGCCAGAGAATGGTGCCGGGGACCG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
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Protein Sequence: >MR229634 representing NM_001271423
Red=Cloning site Green=Tags(s)

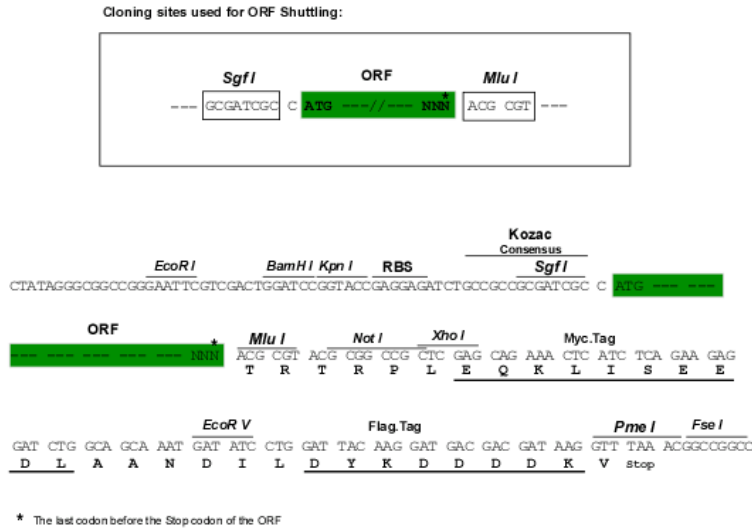
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 NGSLLL PATGIVDEGTFRCRATNRRGKEVKSNYRVRVYQIPGKPEIVDPASELTASVFNKVGTCVSEGSY
 PAGTLSWHL D GKLLIPDGKETLVKEETRRHPETGLFTLRSELTVIPTQGGTHPTFSCSFSLGLPRRRPLN
 TAPIQLRVREPGPPEGIQLLVEPEGGIVAPGGT VLTCAISAQPPPQVHWIKDGAPLPLAPSPVLLLPEV
 GHEDEGTYS CVATHPSHGPPVSI RVTG SVGESGLGTLALALGILGGLGVVALLVGAILWRKRQPRR
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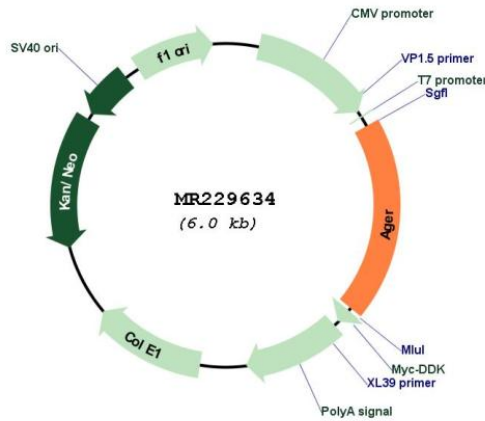
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:

NM_001271423

ORF Size:	1152 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:	<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.
RefSeq:	NM_001271423.1 , NP_001258352.1
RefSeq Size:	1333 bp
RefSeq ORF:	1155 bp
Locus ID:	11596
UniProt ID:	Q62151
Cytogenetics:	17 B1
MW:	41.2 kDa

Gene Summary:

Mediates interactions of advanced glycosylation end products (AGE). These are nonenzymatically glycosylated proteins which accumulate in vascular tissue in aging and at an accelerated rate in diabetes. Acts as a mediator of both acute and chronic vascular inflammation in conditions such as atherosclerosis and in particular as a complication of diabetes. AGE/RAGE signaling plays an important role in regulating the production/expression of TNF-alpha, oxidative stress, and endothelial dysfunction in type 2 diabetes. Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key proinflammatory mediators. Interaction with S100B after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling. Can also bind oligonucleotides. Receptor for amyloid beta peptide. Contributes to the translocation of amyloid-beta peptide (ABPP) across the cell membrane from the extracellular to the intracellular space in cortical neurons. ABPP-initiated RAGE signaling, especially stimulation of p38 mitogen-activated protein kinase (MAPK), has the capacity to drive a transport system delivering ABPP as a complex with RAGE to the intraneuronal space. RAGE-dependent signaling in microglia contributes to neuroinflammation, amyloid accumulation, and impaired learning/memory in a mouse model of Alzheimer disease. [UniProtKB/Swiss-Prot Function]