

## Product datasheet for **RG208916**

### Methionine Sulfoxide Reductase A (MSRA) (NM\_012331) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Methionine Sulfoxide Reductase A (MSRA) (NM_012331) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Methionine Sulfoxide Reductase A
Synonyms:	PMSR
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG208916 representing NM_012331 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTCTCGGCCACCCGGAGGGCTTGCCAGCTCCTCCTCCACAGCCTCTTCCCGTCCCGAGGATGG  
GCAACTCGGCCTCGAACATCGTCAGCCCCCAGGAGGCCTTGCCGGGCCGGAAGGAACAGACCCCTGTAGC  
GGCCAAACATCATGTCAATGGCAACAGAACAGTCGAACCTTCCAGAGGGAACACAGATGGCTGTATTT  
GGAATGGGATGTTTCTGGGGAGCTGAAAGGAAATTCTGGGTCTTGAAGGAGTGTATTCAACTCAAGTTG  
GTTTTGCAGGAGGCTATACTTCAAATCCTACTTATAAAGAAGTCTGCTCAGAAAAAACTGGCCATGCAGA  
AGTCGTCCGAGTGGTGTACCAGCCAGAACATGAGTTTTGAGGAACTGCTCAAGGTCTTCTGGGAGAAT  
CAGCACCCGACCAAGGTATGCGCCAGGGGAACGACCATGGCACTCAGTACCGCTCGGCCATCTACCCGA  
CCTCTGCCAAGCAAAATGGAGGCAGCCCTGAGCTCCAAAGAGAACTACCAAAGGTTCTTTCAGAGCACGG  
CTTCGGCCCCATCACTACCGACATCCGGGAGGGACAGACTTTCTACTATGCGGAAGACTACCACCAGCAG  
TACCTGAGCAAGAACCCCAATGGCTACTGCGCCCTTGGGGCACCGCGTGTCTGCCAGTGGGTATTA  
AAAAA

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG208916 representing NM\_012331  
 Red=Cloning site Green=Tags(s)

MLSATRRACQLLLLHSLFPVPRMGNSASNIIVSPQEALPGRKEQTPVAAKHHVNGNRTVEPFPEGTQMAVF  
 GMGCFWGAERKFWLKGVYSTQVGFAGGYTSNPTYKEVCSEKTGHAEVVRVYQPEHMSFEELLKVFWEN  
 HDPTQGMROGNDHGTQYRSAIYPTSAKQMEAALSSKENYQKVLSEHGFGPITTDIREGQTFYYAEDYHQQ  
 YLSKNPNGYCGLGGTGVSCPVGIIK

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_012331

**ORF Size:** 705 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\\_012331.5](#)

**RefSeq Size:** 1502 bp

**RefSeq ORF:** 708 bp

**Locus ID:** 4482

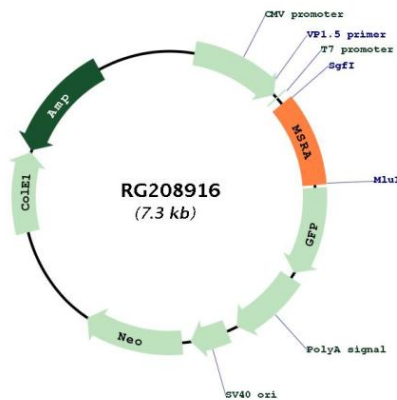
**UniProt ID:** [Q9UJ68](#)

**Cytogenetics:** 8p23.1

**Domains:** PMSR

**Gene Summary:** This gene encodes a ubiquitous and highly conserved protein that carries out the enzymatic reduction of methionine sulfoxide to methionine. Human and animal studies have shown the highest levels of expression in kidney and nervous tissue. The protein functions in the repair of oxidatively damaged proteins to restore biological activity. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]

**Product images:**



Circular map for RG208916