

## Product datasheet for RC202023

### AGR2 (NM\_006408) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Tag:** Myc-DDK  
**Symbol:** AGR2  
**Synonyms:** AG-2; AG2; GOB-4; HAG-2; HEL-S-116; HPC8; PDIA17; XAG-2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC202023 representing NM\_006408  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCCGATCGCC

ATGGAGAAAATTCAGTGTGAGCATTCTTGCTCCTTGCGCCCTCTCCTACACTCTGGCCAGAGATACCA  
 CAGTCAAACCTGGAGCCAAAAAGGACACAAAGGACTCTCGACCCAACTGCCCGAGACCTCTCCAGAGG  
 TTGGGGTGACCACTCATCTGGACTCAGACATATGAAGAAGCTCTATATAATCCAAGACAAGCAACAAA  
 CCCTTGATGATTATTCATCACTTGATGAGTGCCACACAGTCAAGCTTTAAAGAAAGTGTGCTGAAA  
 ATAAAGAAATCCAGAAATTGGCAGAGCAGTTTGTCTCCTCAATCTGGTTTATGAAACAACTGACAAACA  
 CCTTTCTCCTGATGGCCAGTATGTCCCGAGGATTATGTTTGTGACCCATCTCTGACAGTTAGAGCCGAT  
 ATCACTGGAAGATATTCAAACCGTCTCTATGCTTACGAACCTGCAGATACAGCTCTGTTGCTTGACAACA  
 TGAAGAAAGCTCTCAAGTTGCTGAAGACTGAATTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC202023 representing NM\_006408  
 Red=Cloning site Green=Tags(s)

MEKIPVSAFLLLVALSYTLARDTTVKPGAKKDTKDSRPKLPQTL SRGWDQLIWTQTYEEALYKSKTSNK  
 PLMI IHHLDECPHSQALKKVFAENKEIQKLAEQVLLNLVYETTDKHLSPDGQYVPRIMFVDPSTVRAD  
 ITGRYSNRLYAYEPADTALLLDNMKKALKLLKTEL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6011\\_g12.zip](https://cdn.origene.com/chromatograms/mk6011_g12.zip)

**Restriction Sites:** SgfI-MluI



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## Cloning Scheme:



ACCN: NM\_006408

ORF Size: 525 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM\\_006408.4](#)

RefSeq Size: 1701 bp

RefSeq ORF: 528 bp

Locus ID: 10551

UniProt ID: O95994

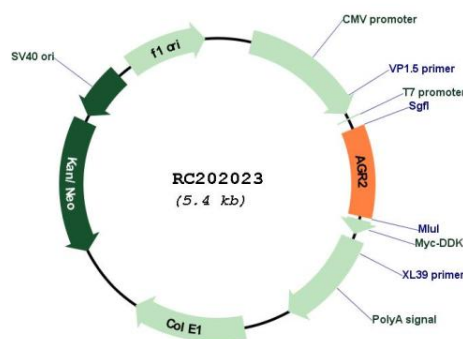
Cytogenetics: 7p21.1

Protein Families: Secreted Protein

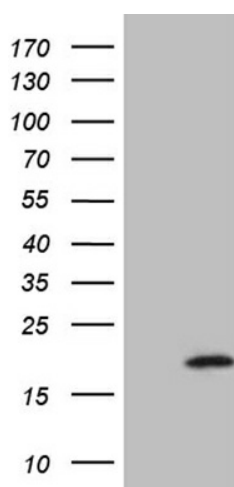
MW: 19.8 kDa

**Gene Summary:** This gene encodes a member of the disulfide isomerase (PDI) family of endoplasmic reticulum (ER) proteins that catalyze protein folding and thiol-disulfide interchange reactions. The encoded protein has an N-terminal ER-signal sequence, a catalytically active thioredoxin domain, and a C-terminal ER-retention sequence. This protein plays a role in cell migration, cellular transformation and metastasis and is as a p53 inhibitor. As an ER-localized molecular chaperone, it plays a role in the folding, trafficking, and assembly of cysteine-rich transmembrane receptors and the cysteine-rich intestinal glycoprotein mucin. This gene has been implicated in inflammatory bowel disease and cancer progression. [provided by RefSeq, Mar 2017]

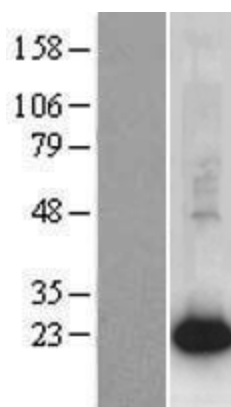
## Product images:



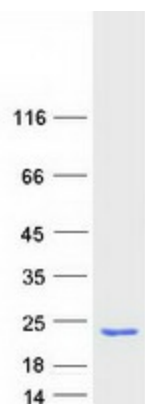
Circular map for RC202023



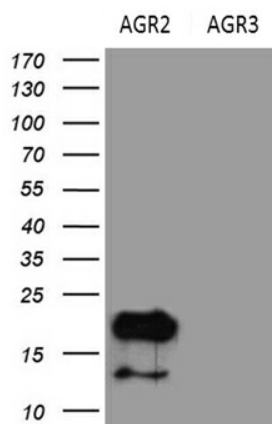
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY AGR2 (Cat# RC202023, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-AGR2 (Cat# [TA809754])(1:2000). Positive lysates [LY416668] (100ug) and [LC416668] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY416668]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202023 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified AGR2 protein (Cat# [TP302023]). The protein was produced from HEK293T cells transfected with AGR2 cDNA clone (Cat# RC202023) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY AGR2 (Cat# RC202023, Left lane) or pCMV6-ENTRY AGR3 (Cat# [RC208897], 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-AGR2(Cat# [TA809754]) (Cat# [TA809754]) (1:2000).