

## Product datasheet for **RG218976**

### MRP2 (ABCC2) (NM\_000392) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	MRP2 (ABCC2) (NM_000392) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MRP2
Synonyms:	ABC30; CMOAT; cMRP; DJS; MRP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG218976 representing NM_000392 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGGAGAAGTTCTGCAACTCTACTTTTTGGAATTCCTCATTCTGGACAGTCCGGAGGCAGACCTGC  
CACTTTGTTTTGAGCAAAGTCTGCTGGTGGATTCCCTTGGGCTTCTATGGCTCCTGGCCCCCTGGCA  
GCTTCTCCACGTGTATAAATCCAGGACCAAGAGATCCTCTACCACCAAATCTATCTTGCTAAGCAGGTA  
TTCGTTGGTTTTCTTATTCTAGCAGCCATAGAGCTGGCCCTTGACTCACAGAAGACTCTGGACAAG  
CCACAGTCCCTGCTGTTGATATACCAATCCAAGCCTCTACCTAGGCACATGGCTCCTGGTTTTGCTGAT  
CCAATACAGCAGACAATGGTGTGTACAGAAAACTCCTGGTTCCTGTCCCTATTCTGGATTCTCTCGATA  
CTCTGTGGCACTTCCAATTTCAAGACTCTGATCCGGACACTCTTACAGGGTGACAATTCTAATCTAGCCT  
ACTCCTGCCTGTTCTTCACTCTCCTACGGATTCCAGATCCTGATCCTGATCTTTTCAAGATTTTCAAGAAA  
TAATGAGTCATCAAATAATCCATCATCCATAGCTTCATTCTGAGTAGCATTACCTACAGCTGGTATGAC  
AGCATCATTCTGAAAGGCTACAAGCGTCTCTGACACTCGAGGATGTCTGGGAAGTTGATGAAGAGATGA  
AAACCAAGACATTAGTGAGCAAGTTTGAACGCACATGAAGAGAGAGCTGCAGAAAGCCAGGCGGGCACT  
CCAGAGACGGCAGGAGAAGAGCTCCAGCAGAAGCTCTGGAGCCAGGCTGCCTGGCTTGAACAAGAATCAG  
AGTCAAAGCCAAGATGCCCTTGTCTGGAAGATGTTGAAAAGAAAAAAGAAGTCTGGACCAAAAAAG  
ATGTTCCAAAATCCTGGTTGATGAAGGCTCTGTTCAAACTTTCTACATGGTGCTCCTGAAATCATTCT  
ACTGAAGCTAGTGAATGACATCTTCACGTTTGTGAGTCTCAGCTGCTGAAATTGCTGATCTCCTTTGCA  
AGTGACCGTGACACATATTTGTGGATTGGATATCTCTGTGCAATCCTCTTATTCACTGCGGCTCTCATT  
AGTCTTTCTGCCTTCAGTGTTATTTCCAAGTGTGCTTCAAGCTGGGTGTAAGTACGGACAGCTATCAT  
GGCTTCTGTATATAAGAAGCATTGACCCTATCCAAGTGGCCAGGAAGGAGTACACCATTGGAGAAACA  
GTGAACCTGATGTCTGTGGATGCCAGAAAGCTCATGGATGTGACCAACTCATGCACATGCTGTGGTCAA  
GTGTTCTACAGATTGCTTATCTATCTTCTTCTATGGAGAGAGTTGGGACCCTCAGTCTTAGCAGGTGT  
TGGGGTATGGTCTTGAATCCAATTAATGCGATACTGTCCACCAAGAGTAAGACCATTCAAGTCAA



[View online »](#)

AATATGAAGAATAAAGACAAACGTTTAAAGATCATGAATGAGATTCTTAGTGGAATCAAGATCCTGAAAT  
 ATTTTGCCTGGGAACCTTCATTACAGAGACCAAGTACAAAACTCCGGAAGAAAGAGCTCAAGAACCTGCT  
 GGCCTTAGTCAACTACAGTGTGTAGTAATATTCGTCTCCAGTTAACTCCAGTCTGGTATCTGTGGTC  
 ACATTTTCTGTTTATGCCTGGTGGATAGCAACAATATTTGGATGCACAAAAGGCCCTCACCTCCATTA  
 CCCTCTCAATATCCTGCGCTTTCCCTGAGCATGCTCCCATGATGATCTCCTCCATGCTCCAGGCCAG  
 TGTTTCCACAGAGCGGCTAGAGAAGTACTTGGGAGGGGATGACTTGGACACATCTGCCATTCGACATGAC  
 TGCAATTTTGACAAAGCCATGCAGTTTTCTGAGGCCTCCTTTACCTGGGAACATGATTCGGAAGCCACAG  
 TCCGAGATGTGAACCTGGACATTATGGCAGGCCAACTTGTGGCTGTGATAGGCCCTGTGCGCTCTGGGAA  
 ATCCTCCTTGATATCAGCCATGCTGGGAGAAAATGGAAAATGTCCACGGGCACATCACCATCAAGGGCACC  
 ACTGCCTATGTCCACAGCAGTCTGGATTGAGAAATGGCACCATAAAGGACAACATCCTTTTTGGAACAG  
 AGTTTAAATGAAAAGAGGTACCAGCAAGTACTGGAGGCCTGTGCTCTCCTCCAGACTTGGAAATGCTGCC  
 TGGAGGAGATTTGGCTGAGATTGGAGAGAAGGGTATAAATCTTAGTGGGGTCAAGAGCAGCGGATCAGC  
 CTGGCCAGAGCTACCTACAAAATTTAGACATCTATCTTAGATGACCCCTGTCTGCAGTGGATGCTC  
 ATGTAGGAAAACATATTTTTAATAGGTCTTGGGCCCAATGGCCTGTTGAAAGGCAAGACTCGACTCTT  
 GGTACACATAGCATGCACCTTTCTCCTCAAGTGGATGAGATTGTAGTTCTGGGGAATGGAACAATTGTA  
 GAGAAAGGATCCTACAGTCTCTCCTGGCCAAAAAAGGAGAGTTTGCTAAGAATCTGAAGACATTTCTAA  
 GACATACAGGCCCTGAAGAGGAAGCCACAGTCCATGATGGCAGTGAAGAAGAAGACGATGACTATGGGCT  
 GATATCCAGTGTGGAAGAGATCCCCGAAGATGCAGCCTCCATAACCATGAGAAGAGAGAACGCTTTCGT  
 CGAACACTTAGCCGAGTCTAGGTCCAATGGCAGGCACTGAAGTCCCTGAGAACTCCTTGAAAACCTC  
 GGAATGTGAATAGCCTGAAGGAAGACGAAGAAGTACTGAAAGGACAAAACTAATTAAGAAGGAATTCAT  
 AGAACTGGAAGGTGAAGTTCTCCATCTACCTGGAGTACCTACAAGCAATAGGATTGTTTTCGATATTC  
 TTCATCATCCTTGCCTTGTGATGAATTCTGTGGCTTTTATTGGATCCAACCTCTGGCTCAGTGTGGA  
 CCAGTACTTAAAATCTTCAATAGCACCGACTATCCAGCATCTCAGAGGACATGAGAGTTGGACTCA  
 CGGAGCTCTGGGATTAGCCCAAGGTATATTTGTGTTTATAGCACATTTCTGGAGTGCCTTTGGTTTCGTC  
 CATGCATCAAATATCTTGACAAGCAACTGCTGAACAATATCCTTCGAGCACCTATGAGATTTTTTGACA  
 CAACACCCACAGGCCGATTGTGAACAGGTTTGGCGGCGATATTTCCACAGTGGATGACACCCTGCCTCA  
 GTCCTTGGCAGCTGGATTACATGCTTCTGGGATAATCAGCACCTTGTGATGATCTGCATGGCCACT  
 CCTGTCTTACCATCATCGTCATTCCTTGGCATTATTTATGTATCTGTTGAGATGTTTTATGTGTCTA  
 CCTCCCGCAGCTGAGGCGTCTGGACTGTGACCAGTCCCAATCTACTCTACTTACGCGAGACCGT  
 ATCAGGTTTGCCAGTTATCCGTGCCTTTGAGCACCAGCAGCGATTTCTGAAACACAATGAGGTGAGGATT  
 GACACCAACCAGAAATGTGTCTTTTCTGGATCACCTCCAACAGGTGGCTTGCAATTCGCTGGAGCTGG  
 TTGGGAACCTGACTGTCTTCTTTTCCAGCTTGTGATGTTATTTATAGAGATACCCTAAGTGGGGACAC  
 TGTGGCTTTGTTCTGTCCAATGCACTCAATATCACACAAACCTGAACTGGCTGGTGAGGATGACATCA  
 GAAATAGAGACCAACATTGTGGCTGTTGAGCGAATAACTGAGTACACAAAAGTGGAAAATGAGGCACCCT  
 GGGTGACTGATAAGAGGCCTCCGCCAGATTGGCCAGCAAAGGCAAGATCCAGTTTAAACAACTACCAAGT  
 GCGGTACCGACCTGAGCTGGATCTGGTCTCAGAGGGATCACTTGTGACATCGGTAGCATGGAGAAGATT  
 GGTGTGGTGGGCAGGACAGGAGCTGGAAGTCATCCCTCACAACCTGCCTCTTCAAGATCTTAGAGGCTG  
 CCGGTGGTCAGATTATCATTGATGGAGTAGATATTGCTTCCATTGGGCTCCACGACCTCCGAGAGAAGCT  
 GACCATCATCCCCAGGACCCCATCCTGTTCTCTGGAAGCCTGAGGATGAATCTCGACCTTTCAACAAC  
 TACTCAGATGAGGAGATTTGGAAGGCCTTGGAGCTGGCTCACCTCAAGTCTTTTGTGGCCAGCCTGCAAC  
 TTGGGTTATCCCAGAAAGTACAGAGGCTGGTGGCAACCTGAGCATAGGCCAGAGGCAGCTGCTGTGCCCT  
 GGGCAGGGCTCTGCTTCGGAAAATCCAAGATCCTGGTCTGGATGAGGCCACTGCTGCGGTGGATCTAGAG  
 ACAGACAACCTCATTGACAGCACCATCCAAAACGAGTTCCGCCACTGCACAGTATCACCATCGCCACACA  
 GGCTGCACACCATCATGGACAGTACAAGTAATGGTCTAGACAACGGGAAGATTATAGAGTGGCGCAG  
 CCCTGAAGAACTGCTACAAATCCCTGGACCCTTTACTTTATGGCTAAGGAAGCTGGCATTGAGAATGTG  
 AACAGCACAAAATTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG218976 representing NM\_000392  
 Red=Cloning site Green=Tags(s)

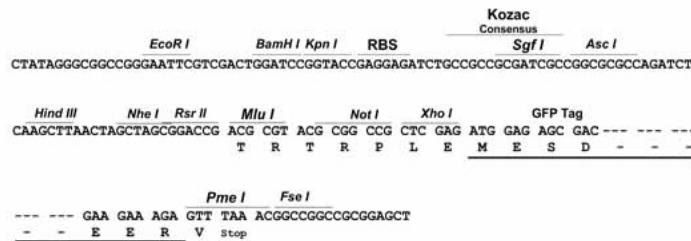
MLEKFCNSTFWNSSFLDSPEADLPLCFEQTVLWVPLGFLWLLAPWQLLHVYKSRTKRSSTTKLYLAKQV  
 FVGFLILAAIELALVLTEDSGQATVPAVRYTNPSLYLGTWLLVLLIQYSRQWCQKNSWFLSLFWILSI  
 LCGTFQFQTLIRTLTLLQGDNSNLAYSCLFFISYGFQILILIFSAFSENNESSNPPSSIASFLSSITYSWYD  
 SIILKGYKRPLTLEDVWEVDEEMKTKTLVSKFETHMKRELQKARRALQRRQEKSSQNSGARLPGLNKNQ  
 SQSQDALVLEDVEKKKKSGTKKDVPKSWLMKALFKTFYMVLLKSFLLKLVNDIFTFVSPQLLKLISFA  
 SDRDITYLWIGYLCAILLFTAALIQSFCLQCYFQLCFKLGKVRTAIMASVYKKALTLNLSARKEYTIGET  
 VNLMSVDAQKLMVTFMHLWSSVLQIVLSIFFLWRELGPSVLAGVGMVLPVIPAAILSTKSKIQVK  
 NMKNKDKRLKIMNEILSGIKILKYFAWEPFRDQVQNLRRKELKNLLAFSQLQCVVIFVFLTPVLVSVV  
 TFSVYVLDVSNNILDAQFTSITLFNILRFPLSMLPMMISSMLQASVSTERLEKYLGGDDLDTSAIRHD  
 CNFDKAMQFSEASFTWEHDSEATVRDVNLDIMAGQLVAVIGPVGSGKSSLSAMLGEMENVHGHITIKGT  
 TAYVPPQSWIQNGTIKDNILFGTEFNEKRYQQVLEACALLPDLEMLPGDLAEIGEKGINLSGGQKQRIS  
 LARATYQNLDIYLLDDPLSAVDAHVGKHFVFNKVLGPNLLKGGKTRLLVTHSMHFLPQVDEIVVLGNGTIV  
 EKGYSYALLAKKGEFAKNLKTFLRHTGPEEEATVHDGSEEDDDYGLISSVEEIPEDAASITMRRENSFR  
 RTLRSRSRNGRHLKSLRNSLKRNVNSLKEDEELVKGQKLIKKEFIETGKVKFSIYLEYLQAIGLFSIF  
 FIILAFVMNSVAFIGSNLWLSAWTSDSKIFNSTDYPASQRDMRVGVYALGLAQQGIFVIAHFWSAFGFV  
 HASNILHKQLLNNILRAPMRFFDTTPTGRIVNRFAGDISTVDDTLPQSLRSWITCFLGIISTLVMICMAT  
 PVFTIIVIPLGIYVSVQMFYVTSRQLRRLDSVTRSPIYSHFSETVSGLPVIRAFEHQQRFLKHNEVRI  
 DTNQKCVFSWITSNRWLAIKLELVGNLTVFFSALMMVIYRDTLSGDTVGFVLSNALNITQTLNWLVRMTS  
 EIETNIVAVERITEYTKVENEAPWVTDKRPPDWPSSKGIQFNQYVRYRPELDLVLRGITCDIGSMEKI  
 GVVGRTAGKSSLTNCLFRILEAAGGQIIIDGVDIASIGLHDLREKLTIIIPQDPILFSGSLRMNLDPFNN  
 YSDEEIWKALELAHLKSFVASLQLGLSHEVTEAGGNLSIGQRQLLCLGRALLRKSKILVLDATAAVDLE  
 TDNLIQTITIQNEFAHCTVITIAHRLHTINDSDKVMVLDNGKIIIECGSPEELLQIPGPFYFMAKEAGIENV  
 NSTKF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**ACCN:** NM\_000392

**ORF Size:** 4635 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](mailto: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:**

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\\_000392.1](#), [NP\\_000383.1](#)

**RefSeq Size:** 4868 bp

**RefSeq ORF:** 4638 bp

**Locus ID:** 1244

**UniProt ID:** [Q92887](#)

**Cytogenetics:** 10q24.2

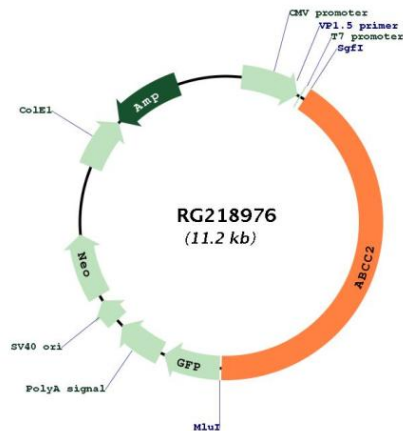
**Domains:** ABC\_membrane, ABC\_tran, AAA

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** ABC transporters

**Gene Summary:**

The protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MRP subfamily which is involved in multi-drug resistance. This protein is expressed in the canalicular (apical) part of the hepatocyte and functions in biliary transport. Substrates include anticancer drugs such as vinblastine; therefore, this protein appears to contribute to drug resistance in mammalian cells. Several different mutations in this gene have been observed in patients with Dubin-Johnson syndrome (DJS), an autosomal recessive disorder characterized by conjugated hyperbilirubinemia. [provided by RefSeq, Jul 2008]

**Product images:**


Circular map for RG218976