

## Product datasheet for RC224017

### MRP5 (ABCC5) (NM\_005688) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | MRP5 (ABCC5) (NM_005688) Human Tagged ORF Clone                             |
| Tag:                      | Myc-DDK   |
| Symbol:                   | MRP5  |
| Synonyms:                 | ABC33; EST277145; MOAT-C; MOATC; MRP5; pABC11; SMRP                         |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-Entry (PS100001)  |
| E. coli Selection:        | Kanamycin (25 ug/mL)  |
| ORF Nucleotide Sequence:  | >RC224017 representing NM_005688<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCCGGATCGCC

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GAGATGAAAAATGCCACCTTGGCATGGGACTCCTCCCCTCCAGTATCCAGAACTCGCCCAAGCTGACCC  
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CCATGTTTGTGCTGCAGAGAACAAGGTCGCTGTCAAGGGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC224017 representing NM\_005688  
 Red=Cloning site Green=Tags(s)

MKDIDIGKEYIIPSPGYRSVRERTSTSGTHRDREDSKFRRTTRPLECQDALETAARAEGSLDASMHSQLR  
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 SSDVNCRRLERLWQEELNEVGPDAASLRVWVIFCRTRLILSIVCLMITQLAGFSGPAMFVKHLLLEYTQA  
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 EEEGKHIHLGHLRLQRTLHSIDLEIQEGKLVGICGVSQKTSLSAISLQMTLLEGSIAISGTFAYVAQ  
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 IGLADLRSLKLSIIPQEPVLSGTVRSNLDPFNQYTEDQIWDALERTHMKECIAQLPLKLESEVMENGDNF  
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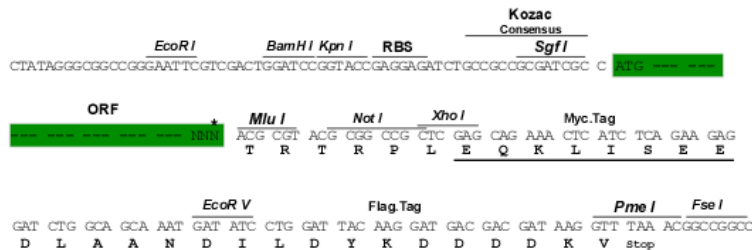
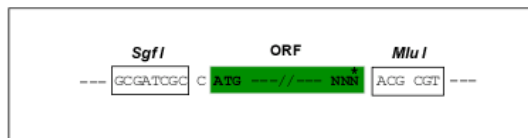
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_005688

**ORF Size:** 4311 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\\_005688.4](#)

**RefSeq Size:** 5851 bp

**RefSeq ORF:** 4314 bp

**Locus ID:** 10057

**UniProt ID:** [O15440](#)

**Cytogenetics:** 3q27.1

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

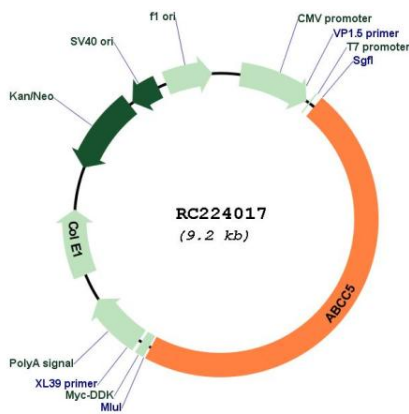
**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** ABC transporters

**MW:** 160.5 kDa

**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 functions in the cellular export of its substrate, cyclic nucleotides. This export contributes to the degradation of phosphodiesterases and possibly an elimination pathway for cyclic nucleotides. Studies show that this protein provides resistance to thiopurine anticancer drugs, 6-mercaptopurine and thioguanine, and the anti-HIV drug 9-(2-phosphonylmethoxyethyl)adenine. This protein may be involved in resistance to thiopurines in acute lymphoblastic leukemia and antiretroviral nucleoside analogs in HIV-infected patients. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2016]

**Product images:**


Circular map for RC224017