

Product datasheet for **MG214307**

Mfsd12 (NM_028657) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Tag:	TurboGFP
Symbol:	Mfsd12
Synonyms:	C19orf28; F630110N24Rik; gr; Wdt1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence: >MG214307 representing NM_028657
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTGCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCGCGATCGCC

ATGTCGCCTCCGTGGACGACGACGAGCCCGGGGCGCCGCGGACGCTGTCCCTCGCCGCGGGCTGAGCT
 TCGCGGTGGCCACTTCTCAACGACTGTGCGCCGGCATGTGGTTCACCTACCTGCTACTATTCTGCA
 CTCCGTGCGCGGGTACAGCTCGCGGGGCGCGGGGCTGCTGCTGCTGGGCCAAGTGGCCGACGGGCTC
 TGCACGCCGCTCGTGGGCTACGAGGCGGACCGCGCCTCTCGCTGCGCTGTGGCCCCGCAAGGCCTGGC
 ACCTAGCGGGCACTGTCTGTCTCTCTCTCCCTCCCGTTCATCTTCAGCCCGTGCCTGGGCTGCGGGGA
 AGCCACGCCTGAATGGGCTGCCTTGTGTACTATGGACCCCTTCAATGTCGCTTCCAGTTTGGCTGGGCT
 GCCACGCAGATTGCCACCTGAGCCTCATCCCAGAGCTGGTGACCAGTGACCACGAGAAGGTGGAGCTCA
 CGGCCCTCAGGTATGCGTTCCTGTGGTAAACATCACCGTGTACGGCGCAGCCTGGCTGCTGCTGCA
 CTTGCAGGGCTCTGCACACGGCGAGCAGGACATCAGTGTGGTGACCAGCTAGGAGTCCAGGATGTGCC
 GTGTTCCGGAACCTGGCCCTGCTTGTGGTGGGTGGGAGCCATCTTCTCTGCTCTTCCACTTGGGTA
 CCAAGGAGGGCCACAGGTCACGACTGGGGAAACGAACCAATGAGCACACCCCTGGTGGCCCCAGC
 GGCCAGCCACTGCTGTGGAAACACTGGTTCGGGAGCCAGCTTTTATCAGGTAGGCATGCTGTAC
 ATGACCACAAGGCTCATGTGAACCTGCTCAGACCTACATTGCCATGTACCTGACCTATTCTCAGCT
 TGCCCAAGAAGTTCATCGCCACCATCCCCCTGGTGTACTTGGAGTGGCTTCTCTTCCCTTCCAT
 GAAGCCAGTCAACCGGCGCATAGGGAGGAATATGACCTACTTCACCGGGCTGCTGGTATCTGGCCTTC
 GCAGCTTGGTGGCCCTGGCAGATAATCTGGGTGTGGCCGTGTACGGGGCTGCAGTGTGCTAGGTGCAG
 GCTGTGCCACCATCTTGTACCTCCCTAGCCATGACAGCTGACCTCATTGGCCACACACGCACAGTGG
 AGCCTTCGTGTATGGTGTATGAGCTTTTCGGATAAAGGTGGCAACGGACTGGCAGTCATGGCTGTGCAG
 AGCCTGCATCCCTGTCCCTCTGAGCTGTGCTGTGGGCGCTGCATCAGCTTCTACCACTGGGTGATGACAG
 CAGTGACAGGCGCGTGGGTGTGGCCGGCTCTGGCTCTCTGCAGCCTCTCATCTGGCCATCCGCAT
 TCGAACCGGGACCCGCGAGACCGCCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG214307 representing NM_028657
 Red=Cloning site Green=Tags(s)

MSPPSDDAGPPRRLSLAARLSFAVGHFLNDLCAGMWFTYLLLLFLHSVRGYSSRGAGLLLLLGGQVADGL
 CTPLVGYEADRASCVRGPRKAWHLAGTVCVLLSFPFIFSPCLGCGEATPEWAALLYGPFIVVFQFGWA
 ATQIAHLSLIPELVTSDHEKVELTALRYAFVTVANITVYGAWLLLLHLQGSAHGEQDISVGDQLGVQDVP
 VFRNLALLVVGVAIFSLLFHLGKKEGHRSHWGNENHTPLVAPAAQPLLLWKHWLREPAFYQVGMILY
 MTRRLIVNLSQTYIAMYLTYSLSLPKFIATIPVMYLSGFFSSFLMKPVNRRIRGRNMTYFTGLLVILAF
 AAWVALADNLGVAVYGAALLGAGCATILVTSLAMTADLIGPHTHSGAFVYGAMSFSDKVANGLAVMAVQ
 SLHPCPSELCCGACISFYHVVMATAVTGGVGAALALCSLLIWPVIRIRNRDPRDRP

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:


ACCN: NM_028657

ORF Size: 1428 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.

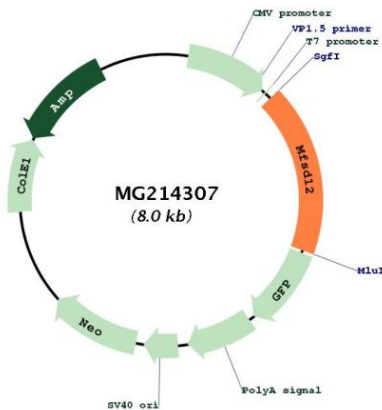
Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_028657.4](#)

RefSeq Size:	1702 bp
RefSeq ORF:	1431 bp
Locus ID:	73822
UniProt ID:	Q3U481
Cytogenetics:	10 C1

Gene Summary: Transporter that mediates the import of cysteine into melanosomes, thereby regulating skin/hair pigmentation (PubMed:33208952). In melanosomes, cysteine import is required both for normal levels of cysteine, the oxidized dimer of cysteine, and provide cysteine for the production of the cysteinyl dopas used in pheomelanin synthesis, thereby regulating skin/hair pigmentation (PubMed:33208952). Also catalyzes import of cysteine into lysosomes in non-pigmented cells (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG214307