

## Product datasheet for **SC109165**

### Dystrophin (DMD) (NM\_004021) Human Untagged Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | Dystrophin (DMD) (NM_004021) Human Untagged Clone   |
| Tag:                      | Tag Free  |
| Symbol:                   | Dystrophin  |
| Synonyms:                 | BMD; CMD3B; DXS142; DXS164; DXS206; DXS230; DXS239; DXS268; DXS269; DXS270; DXS272; MRX85         |
| Mammalian Cell Selection: | None  |
| Vector:                   | <u><a href="#">pCMV6-XL4</a></u>  |
| E. coli Selection:        | Ampicillin (100 ug/mL)  |
| Fully Sequenced ORF:      | >NCBI ORF sequence for NM_004021, the custom clone sequence may differ by one or more nucleotides |

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ATGCCATCTTCCTTGATGTTGGAGGTACCTGCTCTGGCAGATTTCAACCGGGCTTGGACAGAACTTACCG
ACTGGCTTTCTCTGCTTGATCAAGTTATAAAATCACAGAGGGTGATGGTGGGTGACCTTGAGGATATCAA
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**5' Read Nucleotide Sequence:**

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>OriGene 5' read for NM_004021 unedited
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TTGCACACCTTATTAAGGAACTCCAGGATGGCATTGGGCAGCGCAAACCTGTTGTCAGAA
CATTGAATGCAACTGGGGAAGAAATAATTCAGCAATCCTCAAAAACAGATGCCAGTATTC
TACAGGAAAAATTGGGAAGCCTGAATCTGCGGTGGCAGGAGGTCTGCAAAACAGCTGTCAG
ACAGAAAAAAGAGGCTAGAAGAACAAGAATATCTTGTGAGAATTTCAAAGAGATTTAA
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GAAAAGAGCAGCAACTAAAAGAAAAGCTTGAGCAAGTCAAGTTACTGGTGAAGAGTTGC
CCCCGCGCCAGGGAATTTCTAAACAATTAATGAAACTGGAGGACCCGTGCTTGTAAAGTG
CTCCCATAAAGCCAGAAGAGCAAGATAAACTTGAAAATAAGCTCAAGCAGACAAAATCTCC
AGTGGATAAAGGTTTCCAGAGCTTTACCTGAGAAAACAAGGAGAAAATTGAAGCTCAAATAA
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AGATTTTGTCTAAAGGGCAGCATTTGTACAAGGAAAAACCACTCAGCCAGTGAAG
GAAGTAGAAGATCTGAGCCCTGAGTGAAGG
    
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|-------------------------------------|---|
| <b>3' Read Nucleotide Sequence:</b> | >OriGene 3' read for NM_004021 unedited<br>CCGCGGCCGCAATCTAGAGTCGAGNNNNNTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGG<br>ACATAACTGCGTGCTTTATTGAGATACACAGTAAAGCAGTACTATAATACAATAGTAAGG<br>CATATATTTGGGGAAGTCTGATATGTTGGGAAAATGCAGTAAACTGAAGTTAAAAAAA<br>TAATTCGTAATGTTACAGGGTTGGGGTAAAAACACAATTTTTATGATACTCAAGTAAG<br>AACTCAGTACCTGAAAACAATGACAAAACATGCCATGGGATGTTTATGCTTCAGTTACAT<br>TATGATTTACAGTTAATACTTGGGGGTATAAAGAACAACACGAAATATGGCCAAA<br>TTAATTATGCTTAAAATGCAGCAATAAAGCTCTCAATTTTTGTTCAAATATTATGACAGA<br>CTCACTCCAGAGCTAATGGGTCTAAAAGAAAAACAAAAGATTAAAACAAATTATTTAT<br>GCACTCTATTTACCTCTGATTTTAGAATGAAACTTACTTAACTTCTTAGTAGGATGTAA<br>AGTAACCCCTTGGTTTAAATCTGAGTTTTAAAAATCCTTGGGTAAAGAAAAGGTCCAGCG<br>TCACATAAAGGAAAAAATGCAAGACAAAACCAAATCTTCATGTTATTTGGGAATTTGT<br>TACCTTAGAGCTTTGGTTTTCTTTGAAAATTATGAAGGGAAAAGAAAGATTATTAAGG<br>AAAAAGAAATTACGCAATGGACAAGTGGTGAAGCTGTGAAGTGTGACACAATTATC<br>AGGGACCACCCANACCAAGTGAAGTNAATANCATGAGAAGCCGCGTTTGATGGTAAT<br>AAATTATTTTTTAAATGGGCCAACCCCTTTCTCAAAGCTATTACCACTGGATGCAG<br>GCCCTCTCAAAGCTAATACCCCTTGGTCCANAGGTACAGATTTGCAATTTTAGGTAC<br>ACGGGGTTTTTTTTGNATGATGGTTTAAANATCCAAAGACTTAATGCCTGTAGGATAAGG<br>CTTCTCTCC |
| <b>Restriction Sites:</b>           | NotI-NotI   |
| <b>ACCN:</b>                        | NM_004021   |
| <b>Insert Size:</b>                 | 8500 bp   |
| <b>OTI Disclaimer:</b>              | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).  |
| <b>Components:</b>                  | 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).  |
| <b>Reconstitution Method:</b>       | <ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>   |
| <b>RefSeq:</b>                      | <a href="#">NM_004021.1</a> , <a href="#">NP_004012.1</a>   |
| <b>RefSeq Size:</b>                 | 7378 bp   |
| <b>RefSeq ORF:</b>                  | 3732 bp   |
| <b>Locus ID:</b>                    | 1756  |
| <b>UniProt ID:</b>                  | <a href="#">P11532</a>  |
| <b>Cytogenetics:</b>                | Xp21.2-p21.1  |
| <b>Domains:</b>                     | ZnF_ZZ, WW, spectrin  |

**Protein Pathways:** Arrhythmogenic right ventricular cardiomyopathy (ARVC), Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), Viral myocarditis

**Gene Summary:** This gene spans a genomic range of greater than 2 Mb and encodes a large protein containing an N-terminal actin-binding domain and multiple spectrin repeats. The encoded protein forms a component of the dystrophin-glycoprotein complex (DGC), which bridges the inner cytoskeleton and the extracellular matrix. Deletions, duplications, and point mutations at this gene locus may cause Duchenne muscular dystrophy (DMD), Becker muscular dystrophy (BMD), or cardiomyopathy. Alternative promoter usage and alternative splicing result in numerous distinct transcript variants and protein isoforms for this gene. [provided by RefSeq, Dec 2016]

Transcript Variant: Dp140 transcripts use exons 45-79, starting at a promoter/exon 1 located in intron 44. Dp140 transcripts have a long (1 kb) 5' UTR since translation is initiated in exon 51 (corresponding to aa 2461 of dystrophin). In addition to the alternative promoter and exon 1, differential splicing of exons 71-74 and 78 produces at least five Dp140 isoforms. Of these, this transcript (Dp140b) lacks exon 78 and encodes a protein with a unique C-terminus.