

## Product datasheet for **MR218018**

### Diaph3 (NM\_019670) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Diaph3 (NM\_019670) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Diaph3  
**Synonyms:** 4930417P13Rik; Dia2; Diap3; Drf3; mDia2; mKIAA4117; p134MDia2  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR218018 representing NM\_019670  
Red=Cloning site Blue=ORF Green=Tags(s)

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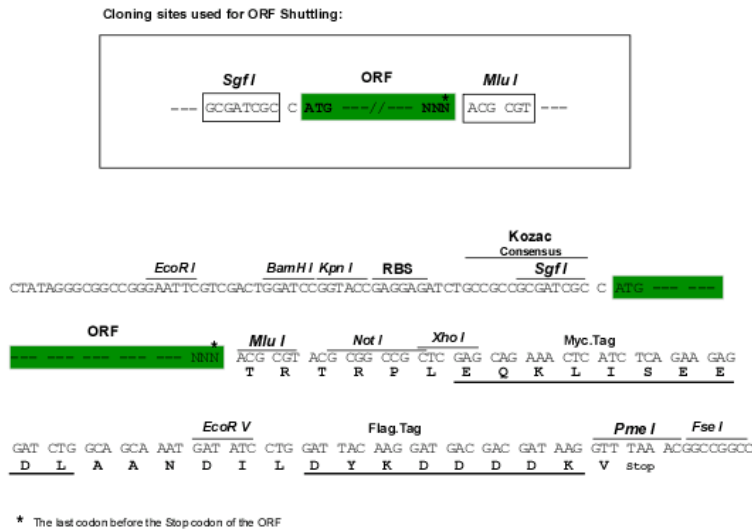
**Protein Sequence:** >MR218018 representing NM\_019670  
 Red=Cloning site Green=Tags(s)

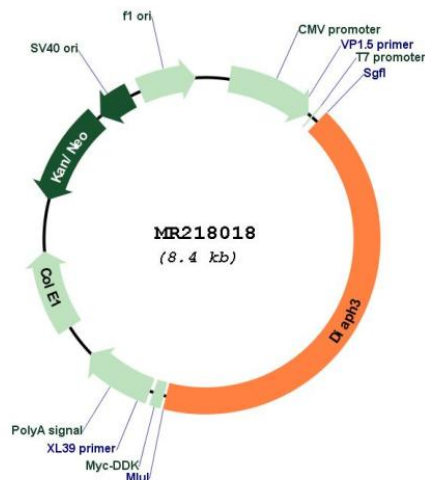
MERHRARALGRDSKSSRRKGLQSAPPAGPYEPGEKRPKLHLNIRTLTDDMLDKFASIRIPGSKKERPLP  
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 ASKTGSLRSSRQISPOEFLHELKMGYTDERLFTYLESLRVSLTSHPVSWVQSFGEHGLGLLLDILEKLIN  
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 NVKRLRPRLSAILFKLQFEEQVNNIKPDIMAVSTACEEIKKSKGF SKLLELVLLMGNYMAGSRNAQTFG  
 FDLSSLCKLKDTKSADQKTTLLHFLVDVCEEKHADILHFVDDL AHLDKASRVSEMLEKNVKQMGRQLQQ  
 LEKNLETFPPPEDLHDKFVIKMSFVISANEQYEKSTLLGSMTQLYQSIMGYYAVDMKKVSVVEEFNDL  
 NNFRTSFMLALKENIKKREAAEKEKRARIKERAERLERQEQEKRLLEMKTEGDETGVMDSLLEALQS  
 GAAFRDRRKRTPKLDIRQSLSPMSQRPVLKVCNHNENQKMQLTEGSRPHHSINCNSTRTPVAKELNYNLD  
 THASTGRIKAVEKEACNAESNKKKEMELLGSAKSESVPVEEALLARLAL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-MluI

**Cloning Scheme:**



**Plasmid Map:**


**ACCN:** NM\_019670

**ORF Size:** 3513 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.

**RefSeq:** [NM\\_019670.2](#)

**RefSeq Size:** 3516 bp

**RefSeq ORF:** 3516 bp

**Locus ID:** 56419

**UniProt ID:** [Q9Z207](#)

**Cytogenetics:** 14 E1

**MW:** 134.1 kDa

**Gene Summary:** Actin nucleation and elongation factor required for the assembly of F-actin structures, such as actin cables and stress fibers (PubMed:10678165, PubMed:23558171). Required for cytokinesis, stress fiber formation and transcriptional activation of the serum response factor (PubMed:10678165, PubMed:23558171). Binds to GTP-bound form of Rho and to profilin: acts in a Rho-dependent manner to recruit profilin to the membrane, where it promotes actin polymerization (PubMed:10678165). DFR proteins couple Rho and Src tyrosine kinase during signaling and the regulation of actin dynamics (PubMed:10678165). Also acts as an actin nucleation and elongation factor in the nucleus by promoting nuclear actin polymerization inside the nucleus to drive serum-dependent SRF-MRTFA activity (PubMed:23558171). [UniProtKB/Swiss-Prot Function]