

## Product datasheet for **MC228886**

### **Fgd4 (NM\_001301818) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Fgd4 (NM_001301818) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Fgd4
Synonyms:	9030023J02Rik; 9330209B17Rik; Fr; Frabp; ZFYVE; ZFYVE6
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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Fully Sequenced ORF: >MC228886 representing NM\_001301818  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGCATCGCC**

ATGGAGGAGTCTAATCCGGCCCCTACTTCTGTACCTCAAAGGGAAGCATAAGTAAAGTATCGGATCTCA  
TCAGCCACTTTGAAGGAGGCAGTGTTCCTCAAGTTACATTGATTTGCAGAAAGATTCTACTATGAACCT  
CAATATTCCTCAAACCTAGGACAGCCTGGGTTAACCTCCTCACCTCCACGAAAAATTTCTGCCCCAGCAC  
TCTCCACAGAAGCAGGAAAAACGACCCAGATCAGACTCAGGGGCAACATGGTTGTTTGCCCAATGGTGTAG  
TGGCTGCACAAAACAGATGGAATGTGAAGATGAGAAGGAGACTACTCTTAGCCAGAGATGGCTATTCA  
GACTGCTGCCCTCCTGATACACATGTGCTGAATGGAGAAAGAAATGAAACCATCACAGATTCTGCA  
TCATCCATAGCCAATAGTCATGATGAAATGCTTCTGACAGCAGCTGCAGGACTCCAGGGACGGACTTAG  
GGCTTCCCTCAAAGAAGGGGAGCCAGGGATGGACGCTGAGCTCCAAGAGAGGGAAAAATGGGGTGAACAC  
CATGGGATTGGATACGTTGGACCAGCACCATGAAGTGAAGGAGACTAATGAACAGAACTTCACAAAATA  
GCCACTGAACTTTTACTTACAGAAAGAGCTTATGTCAGCCGGCTCGACCTCCTAGATCAGGTATTTTATT  
GCAAACATTAGAAGAAGCAAACCGAGGCTCATTTCCTGCAGAGATGGTGAATAAAATCTTTTCTAACAT  
TTCATCAATAAATGCCTTCCATAGTAAATTCCTATTACCTGAGCTGGAGAAACGAATGCAAGAATGGGAA  
ACTACACCAGAATTGGAGATATCCTGCAAAAGTTGGCGCCATTCCTTAAGATGTATGGAGAATACGTGA  
AGGGATTTGATAATGCAGTGGAACTGGTAAAACCATGACAGAGCGTGTCCCCAGTTTAAATCAGTGAC  
TGAAGAGATTGAGAAACAGAAGATCTGTGGAAGCTAACGCTGCAGCATCACATGCTGGAGCCTATTCAG  
CGCATTCCTCGCTATGAGATGCTCCTGAAGGACTACCTGAAGAAGTTGTCTCCTGACTCCCAGACTGGA  
ATGATGCAAAAAAGTCACTTGAAATATATCTACAGCAGCAAGCCATTCTAATAGTGAATAAGAAAAAT  
GGAGAACCTGAAGAACTTTTAGAAATTTATGAGATGTTGGGAGAAGAAGAGGATATTGTAATCCCTCA  
AATGAACATAAAGAAGGACAATCCTCAAACCTAGCAGCTCGGAACACATCAGCACAAGAGCGCTACC  
TCTTCTTATTCAACAACATGTTGCTATATTGTGTGCCAGATTACGTTGGTTGGCTCAAAATTCACAGT  
TCGAACCAGAGTTGGCATTGATGGAATGAAATTTGTGGAGACTCACATGAAGAAATCCACACACTTTC  
CAGATATCTGGGAAAGAAAGAACCTGGAGCTGCAGGCCAGTTCTGAACAAGACAAGGAAGAATGGATCA  
AGGCCCTTCAAGAAAGTATTGATGCTTTTCATCAAAGGCATGAACTTTCAGAAATGCAATCGCAAAGGA  
AAATGACATTCCTAGAAAGTTTCTACTGCTGAGCTGGGAAAACGAGCTCCAAGATGGATACGTGATAAT  
GAAGTGACCATGTGTATGAAGTGCAAGAGTCTTCAATGCACTGACCAGAAGGCGGCATCACTGCCGGG  
CATGTGGACATGTGGTTTGTGGAAATGTTCTGACTACAAGCTCAGCTTGAGTATGATGGTGGAAAGATT  
GAACAAGGTTTGTAAAGACTGTTACCAGATAAATAGTGGATTCACAGACAGTGAAGAAAAGAAAAGAGG  
GGCATTTTAGAGATTGAATCAGCAGAAGTATCAGGAAATAGTGAGGTGTGCAGTTTCTTTCAGTACATGG  
AAAAGTCAAAGCCTTGGCAGAAAATCTGGTGTGTGATCCCAAGCAAGACCCCTTGTGCTGTACATGTA  
TGGCGCTCCTCAGGATGTCAGAGCCCAAGCGACCATACCCCTCCTGGGCTACGTTGTGGATGATATGCCT  
AAGAGTGACAGATCTGCCACATAGTTTCAAGCTGACCCAGTCCAAGTCTGTGCATAGCTTTGCTGCAGACA  
ATGAGGAACTGAAACAGAAATGGCTGAAATCATCCTTCTAGCTGTCACAGGTGAGACACCAGATGGCCC  
AAGTGAGCATCTAGCCACCTTGAACAATCTCCCTGGACCAAGAAAAAGTCAGAAATGCTAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI  
ACCN: NM\_001301818  
Insert Size: 2301 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>OTI Annotation:</b>	Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.
<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>	<u>NM_001301818.1, NP_001288747.1</u>
<b>RefSeq Size:</b>	8324 bp
<b>RefSeq ORF:</b>	2301 bp
<b>Locus ID:</b>	224014
<b>UniProt ID:</b>	<u>Q91ZT5</u>
<b>Cytogenetics:</b>	16 A2- A3
<b>Gene Summary:</b>	<p>This gene is a member of the FYVE, RhoGEF and PH domain containing (FGD) family. The encoded protein is a Cdc42-specific guanine nucleotide exchange factor (GEF) that plays an essential role in regulating the actin cytoskeleton and cell morphology. Disruption of the gene in mouse causes abnormal nerve development and dysmyelination. Mutations in a similar gene in human can cause Charcot-Marie-Tooth disease type 4H (CMT4H), a disorder of the peripheral nervous system. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2014]</p> <p>Transcript Variant: This variant (2) differs in the 5' UTR, lacks a portion of the 5' coding region, and initiates translation at a downstream in-frame start codon, compared to variant 1. It represents the use of an alternate promoter. The resulting isoform (alpha) has a shorter N-terminus, compared to isoform 1. Variants alpha and 2 encode the same isoform (alpha).</p>