

## Product datasheet for **MG220831**

### **Fxyd2 (NM\_052823) Mouse Tagged ORF Clone**

#### **Product data:**

**Product Type:** Expression Plasmids  
**Product Name:** Fxyd2 (NM\_052823) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Fxyd2  
**Synonyms:** Atp1g1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG220831 representing NM\_052823  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

**ATGGACAGGTGGTACCTGGGTGGCAGTGCCAAGGGGACAGAGAATCCCTTCGAGTACGACTATGAAACCG**  
**TCCGCAAAGGAGGCCTGATCTTCGCGGGCCTGGCCTTCGTCGTTGGCCTCCTCATATTCTCAGCAAAG**  
**GTTCCGCTGTGGGGCGGTAAGAAACATAGGCAGGTCAATGAAGTGAAGTGA**

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >MG220831 representing NM\_052823  
Red=Cloning site Green=Tags(s)

MDRWYLGSAKGTENPFYDYETVRKGGILFAGLAFVVGILLIILSKRFRCGGGKKHRQVNEDEL

**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI



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<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<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_052823.3</a>
<b>RefSeq Size:</b>	632 bp
<b>RefSeq ORF:</b>	195 bp
<b>Locus ID:</b>	11936
<b>UniProt ID:</b>	<a href="#">Q04646</a>
<b>Cytogenetics:</b>	9 A5.2
<b>Gene Summary:</b>	<p>This gene encodes a member of a family of small membrane proteins that share a 35-amino acid signature sequence domain, beginning with the sequence PFXYD and containing 7 invariant and 6 highly conserved amino acids. The approved human gene nomenclature for the family is FXYD-domain containing ion transport regulator. Mouse FXYD5 has been termed RIC (Related to Ion Channel). FXYD2, also known as the gamma subunit of the Na,K-ATPase, regulates the properties of that enzyme. FXYD1 (phospholemman), FXYD2 (gamma), FXYD3 (MAT-8), FXYD4 (CHIF), and FXYD5 (RIC) have been shown to induce channel activity in experimental expression systems. Transmembrane topology has been established for two family members (FXYD1 and FXYD2), with the N-terminus extracellular and the C-terminus on the cytoplasmic side of the membrane. The Type III integral membrane protein encoded by this gene is the gamma subunit of the Na,K-ATPase present on the plasma membrane. Although the Na,K-ATPase does not depend on the gamma subunit to be functional, it is thought that the gamma subunit modulates the enzyme's activity by inducing ion channel activity. Multiple transcript variants have been described for this gene that are expressed in tissue-specific and developmental stage-specific patterns and encode proteins that differ at the N-terminus. [provided by RefSeq, Sep 2009]</p>