

## Product datasheet for **MG208560**

### Fyn (NM\_008054) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Fyn (NM_008054) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Fyn
Synonyms:	AI448320; AW552119
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG208560 representing NM\_008054  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGCTGTGTGCAATGTAAGGATAAAGAAGCAGCGAACTGACAGAGGAGAGGGACGGCAGCCTGAACC  
 AGAGCTCTGGGTACCGCTATGGCACAGACCCACCCTCAGCACTACCCAGCTTCGGCGTGACCTCCAT  
 CCCGAACTACAACAACCTCCACGCAGCTGGGGCCAGGGACTCACCGTCTTTGGGGGTGTAACCTCTCC  
 TCTCACACTGGGACCCTACGCACGAGAGGGACAGGAGTGACACTGTTTGTGGCGCTTTATGACTATG  
 AAGCACGGACGGAAGATGACCTGAGTTTTACAAAAGGAGAAAAATTTCAAATATTGAACAGCTCGGAAGG  
 AGACTGGTGGGAAGCCCGCTCCTTGACAACCGGGAACTGGTTACATCCAGCAATTACGTGGCTCCA  
 GTTGACTCCATCCAGGCAGAAGAGTGGTACTTTGGAAAACCTGGCCGCAAAGATGCTGAGAGACAGCTCC  
 TGTCTTTGAAACCCAAGAGGTACCTTTCTTATCCGCGAGAGCGAAACCACAAAGGTGCCTACTCACT  
 TTCCATCCGTGATTGGGATGATATGAAAGGGACCACGTCAAACATTATAAAATCCGCAAGCTTGACAAT  
 GGTGGATACTATATCACAAACCGGGCCAGTTTGAACACTTCAGCAACTGGTACAGCATTACTCAGAGA  
 AAGCTGATGGTTTGTGTTTAACTTAAGTGTGGTTTCATCAAGTTGTACCCACAAAACCTCTGGATTGGC  
 TAAAGATGCTTGGGAAGTTGCACGTGACTCGTTGTTTCTGGAGAAGAAGCTGGGGCAGGGGTGTTTCGCT  
 GAAGTGTGGCTTGGTACCTGGAATGAAATACAAAAGTAGCCATAAAGACCCCTTAAGCCAGGCACCATGT  
 CTCCGGAGTCTTCTGGAGGAGGCGCAGATCATGAAGAAGCTGAAGCATGACAAGCTGGTGCAGCTCTA  
 CGCGGTGCTGTCTGAGGAGCCATTTACATCGTCACGGAGTACATGAGCAAAGGAAGTTTGTCTGACTTC  
 TAAAAGATGGTGAAGGAAGAGCTCTGAAGTTGCCAAACCTGTGGACATGGCGGCACAGGTTGCTGCAG  
 GAATGGCTTACATCGAGCGCATGAATTATATCCACAGAGATTCGGATCAGCAAACATTTAGTGGGGAA  
 TGGACTAATTTGCAAGATTGCTGACTTTGGATTGGCTCGGTTGATTGAAGACAATGAATACACAGCAAGA  
 CAAGGTGCGAAGTTTCCATTAAGTGGACAGCCCCGAAGCGGCCCTGTATGGAAGGTTACAATCAAGT  
 CTGACGTATGGTCTTTGGAATCTTACTCACAGAGCTGGTACCACAAAGGAAGAGTGCCATACCCAGGCAT  
 GAACAACCGGGAGGTGCTGGAGCAGGTGGAGAGAGGCTATAGGATGCCCTGCCACAGGACTGCCCGATC  
 TCCCTGCACGAGCTCATGATCCACTGCTGGAAAAGGATCCGGAAGAGCGCCGACCTTCGAGTACTTGC  
 AGGGCTTCTGGAGGACTACTTACGGCCACAGAGCCCCAGTATCAGCCCGGTGAAAACCTG

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG208560 representing NM\_008054  
 Red=Cloning site Green=Tags(s)

MGCVQCKDKEAAKLTEERDGLNQSSGYRYGTDPTPQHYPVSGVTSIPNYNNFHAAGGQGLTVFGGVNSS  
 SHTGTLRTRGGTGVTLFVALYDYEARTEDDL SFHKGEKFQILNSSEGDWWEARSLTGETGYIPSNYVAP  
 VDSIQAEWYFGKLRKDAERQLLSFGNPRGTFI IRESETTKGAYSL SIRDWDDMKGDHVKHYKIRKLDN  
 GGYITTRAQFETLQQLVQHYSEKADGLCFNLTVVSSSCTPQTSGLAKDAWEVARDSLFLEKKGQCF  
 EVWLGWNGNTKVAIKTLKPGTMSPEFLEEAIQIMKCLKHDKLVQLYAVVSEPIYIVTEYMSKGSLLDF  
 LKDGEGRALKLPNLVDMAAQVAAGMAYIERMNYIHRDLRSANILVGNGLICKIADFLARLIEDNEYTAR  
 QGAKFPIKWTAPEAALYGRFTIKSDVWSFGILL TELVTKGRVPYPMNREVLEQVERGYRMPQDCPI  
 SLHELMIHCWKKDPEERPTFEYLQGFLEDYFTATEPQYQGENL

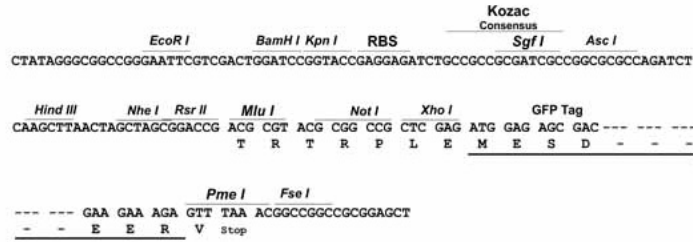
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

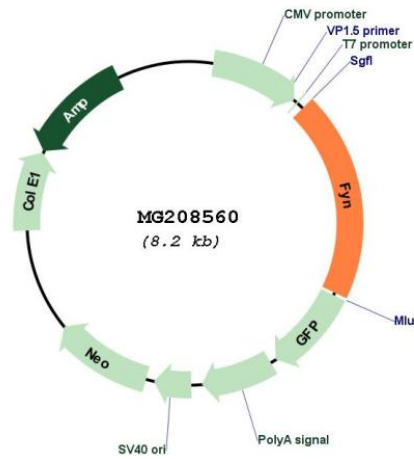
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN:	NM_008054
ORF Size:	1602 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. <a href="#">More info</a>
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:	<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>
RefSeq:	<a href="#">NM_008054.2</a>
RefSeq Size:	3258 bp
RefSeq ORF:	1605 bp
Locus ID:	14360
UniProt ID:	<a href="#">P39688</a>
Cytogenetics:	10 20.51 cM

**Gene Summary:**

Non-receptor tyrosine-protein kinase that plays a role in many biological processes including regulation of cell growth and survival, cell adhesion, integrin-mediated signaling, cytoskeletal remodeling, cell motility, immune response and axon guidance. Inactive FYN is phosphorylated on its C-terminal tail within the catalytic domain. Following activation by PKA, the protein subsequently associates with PTK2/FAK1, allowing PTK2/FAK1 phosphorylation, activation and targeting to focal adhesions. Involved in the regulation of cell adhesion and motility through phosphorylation of CTNNB1 (beta-catenin) and CTNND1 (delta-catenin). Regulates cytoskeletal remodeling by phosphorylating several proteins including the actin regulator WAS and the microtubule-associated proteins MAP2 and MAPT. Promotes cell survival by phosphorylating AGAP2/PIKE-A and preventing its apoptotic cleavage. Participates in signal transduction pathways that regulate the integrity of the glomerular slit diaphragm (an essential part of the glomerular filter of the kidney) by phosphorylating several slit diaphragm components including NPHS1, KIRREL1 and TRPC6. Plays a role in neural processes by phosphorylating DPYSL2, a multifunctional adapter protein within the central nervous system, ARHGAP32, a regulator for Rho family GTPases implicated in various neural functions, and SNCA, a small pre-synaptic protein. Participates in the downstream signaling pathways that lead to T-cell differentiation and proliferation following T-cell receptor (TCR) stimulation. Phosphorylates PTK2B/PYK2 in response to T-cell receptor activation. Also participates in negative feedback regulation of TCR signaling through phosphorylation of PAG1, thereby promoting interaction between PAG1 and CSK and recruitment of CSK to lipid rafts. CSK maintains LCK and FYN in an inactive form. Promotes CD28-induced phosphorylation of VAV1.[UniProtKB/Swiss-Prot Function]