

## Product datasheet for **RG212176**

### SHIP (INPP5D) (NM\_005541) Human Tagged ORF Clone

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | Expression Plasmids   |
| Product Name:             | SHIP (INPP5D) (NM_005541) Human Tagged ORF Clone                            |
| Tag:                      | TurboGFP  |
| Symbol:                   | SHIP  |
| Synonyms:                 | hp51CN; p150Ship; SHIP; SHIP-1; SHIP1; SIP-145                              |
| Mammalian Cell Selection: | Neomycin  |
| Vector:                   | pCMV6-AC-GFP (PS100010)   |
| E. coli Selection:        | Ampicillin (100 ug/mL)  |
| ORF Nucleotide Sequence:  | >RG212176 representing NM_005541<br>Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGTCCCCTGCTGGAACCATGGCAACATCACCCGCTCCAAGGCGGAGGAGCTGCTTTCCAGGACAGGCA  
AGGACGGGAGCTTCTCGTGCCTGCCAGCGAGTCCATCTCCGGGCATACGCGCTCTGCGTGTGTATCG  
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GTCTCCATGAGGTTCTTACCAAGCTGGACCAGCTCATCGAGTTTACAAGAAGGAAAACATGGGGCTGG  
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GCCGGAGCCCGACATGATCACCATCTTCATCGGCACCTGGAACATGGGTAAACGCCCCCTCCCAAGAAG  
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CCTGCAAGAAATCACCAGTGTGACTTTTAAAACAGTCGCCATCCACACGCTCTGGAACATCCGCATCGT



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GTGCTGGCCAAGCCTGAGCACGAGAACCGGATCAGCCACATCTGTACTGACAACGTGAAGACAGGCATTG  
CAAACACACTGGGGAACAAGGGAGCCGTGGGGTGTCTGTTCAATGGAACCTCCTTAGGGTTCGT  
CAACAGCCACTTGACTTCAGGAAGTAAAAGAACTCAGGCGAAACAAAATATATGAACATTCTCCGG  
TTCCTGGCCCTGGGCGACAAGAAGCTGAGTCCCTTTAACATCACTCACCGCTTCACGCACCTCTTCTGGT  
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GCAGCAGTACGCAGACCTCCTGTCCCACGACCAGCTGCTCACAGAGAGGAGGGAGCAGAAGGTCTTCCTA  
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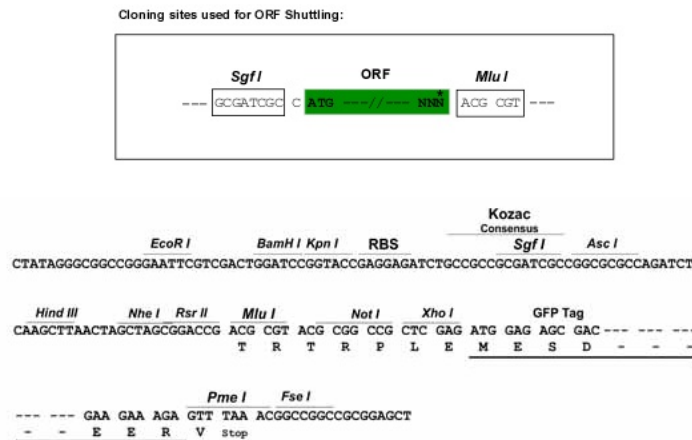
ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG212176 representing NM\_005541  
Red=Cloning site Green=Tags(s)

MVPCWNHGNI TRSKAEELL SRTGKDG SFLVRASEISRAYALCVLYRNCVYTYRILPNEDDKFTVQASEG  
VSMRFFTKLDQLIEFYKKNMGLVTHLQYPVPLEEEDTGDDPEEDTESVVSPPPELPPRNIPLTASSCEAK  
EVPFNSNPRATETS RPSLSETL FQRLQSMDSGLPEEHLKAIQDYLSTQLAQDSEFVKTGSSSLPHLKK  
LTTLLCKEL YGEVIRTLPSLES LQRLFDQQLSPGLRPRPQVPGEANPINMVS KLSQLTSLSSIEDKVKA  
LLHEGPESPHRPSLIPPVTFEVKAESL GIPQKMQLKVDVESGKLIKKSKDGS EDKFYSHKKILQLIKSQ  
KFLNKL VILVETEKEKILRKEYVFADSKKREGFCQLLQQMKNKHSEQPEPDMITIFIGTWNMGNAPPPKK  
ITSWFLSKGQKTRDDSADYIPHDIIYVIGTQEDPLSEKEWLEILKHSLQEITSVTFKTVAIHTLWNIRIV  
VLAKPEHENRISHICTDNVKTGIANTLGNKGAVGVSMFNGTSLGFVNSHLTSGSEKKLRRNQNMNIRL  
FLALGDKKLSPFNITHRFTHLFWFDLNYRVDLPTWEAETIIQKIKQQYADLLSHDQLLTERREQKVFL  
HFEEEEITFAPTYRFERLTRDKYAYTKQKATGMKYNLPSWCDRVLWKSYPVHVVCQSYGSTSDIMTSDH  
SPVFATFEAGVTSQFVSKNGPGTVDSQGQIEFLRCYATLTKTSQTKFYLEFHSSCLESFVKSQEGENEEG  
SEGELVVKFGETLPKLPKPIISDPEYLLDQHILISIKSSDSDESYGEGCIARLEATETQLPIYTPLTHHG  
ELTGHFQGEIKLQTSQGTKREKLYDFVKTERDESSGPKTLKSLTSHDPMKQWEVTSRAPPSSGSSITTEII  
NPNYMGVGPFGPMPHLHVKQTLSPDQQPTAWSYDQPPKDSPLGPCRGE SPPTPPGQPPISPCKFLPSTAN  
RGLPPRTQESRPSDLGKNAGDTLPQEDLPLTKPEMFENPLYGSLSSFPKAPRKDQESPKMPRKEPPPCP  
EPGILSPSIVLTKAQEADRGEGPGKQVPAPRLRSFTCSSSAEGRAAGGDKSQGPKTPVSSQAPVPAKRP  
IKPSRSEINQQTPTPTPRPPLPVKSPAVLHLQHSHKGRDYRDNTELPHHGKHRPEEGPPGPLGRTAMQ

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI  
**Cloning Scheme:**

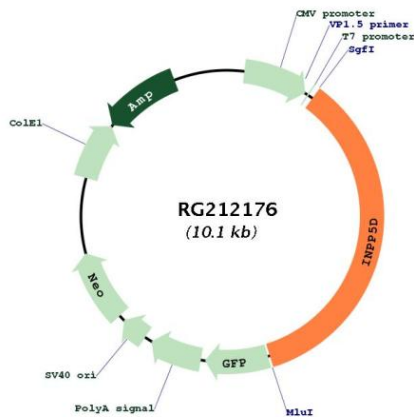


**ACCN:** NM\_005541  
**ORF Size:** 3564 bp

|                               |   |
|-------------------------------|---|
| <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_005541.3</a> , <a href="#">NP_005532.2</a>   |
| <b>RefSeq Size:</b>           | 4925 bp   |
| <b>RefSeq ORF:</b>            | 3567 bp   |
| <b>Locus ID:</b>              | 3635  |
| <b>UniProt ID:</b>            | <a href="#">Q92835</a>  |
| <b>Cytogenetics:</b>          | 2q37.1  |
| <b>Domains:</b>               | SH2, Exo_endo_phos  |
| <b>Protein Families:</b>      | Druggable Genome  |
| <b>Protein Pathways:</b>      | B cell receptor signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Insulin signaling pathway, Phosphatidylinositol signaling system  |

**Gene Summary:**

This gene is a member of the inositol polyphosphate-5-phosphatase (INPP5) family and encodes a protein with an N-terminal SH2 domain, an inositol phosphatase domain, and two C-terminal protein interaction domains. Expression of this protein is restricted to hematopoietic cells where its movement from the cytosol to the plasma membrane is mediated by tyrosine phosphorylation. At the plasma membrane, the protein hydrolyzes the 5' phosphate from phosphatidylinositol (3,4,5)-trisphosphate and inositol-1,3,4,5-tetrakisphosphate, thereby affecting multiple signaling pathways. The protein is also partly localized to the nucleus, where it may be involved in nuclear inositol phosphate signaling processes. Overall, the protein functions as a negative regulator of myeloid cell proliferation and survival. Mutations in this gene are associated with defects and cancers of the immune system. Deficiencies in the encoded protein, SHIP1, have been associated with Inflammatory Bowel Disease types such as Crohn's Disease and Ulcerative Colitis. Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, Jul 2020]

**Product images:**


Circular map for RG212176