

## Product datasheet for **RG205118**

### Osteopontin (SPP1) (NM\_000582) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Osteopontin (SPP1) (NM_000582) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Osteopontin
Synonyms:	BNSP; BSPI; ETA-1; OPN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG205118 representing NM_000582 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGAATTGCAGTGATTTGCTTTTGCCTCCTAGGCATCACCTGTGCCATACCAGTTAAACAGGCTGATT  
CTGGAAGTTCTGAGGAAAAGCAGCTTTACAACAAATACCCAGATGCTGTGGCCACATGGCTAAACCTGA  
CCCATCTCAGAAGCAGAATCTCCTAGCCCCACAGACCCTTCCAAGTAAGTCCAACGAAAGCCATGACCAC  
ATGGATGATATGGATGATGAAGATGATGATGACCATGTGGACAGCCAGGACTCCATTGACTCGAAGGACT  
CTGATGATGTAGATGACTGATGATTCTCACCAGTCTGATGAGTCTCACCATTCTGATGAATCTGATGA  
ACTGGTCACTGATTTTCCACGGACCTGCCAGCAACCGAAGTTTTCACTCCAGTTGTCCCCACAGTAGAC  
ACATATGATGGCCGAGGTGATAGTGTGGTTTATGGACTGAGGTCAAATCTAAGAAGTTTCGCAGACCTG  
ACATCCAGTACCCTGATGCTACAGACGAGGACATCACCTCACACATGGAAAGCGAGGAGTTGAATGGTGC  
ATACAAGGCCATCCCCGTTGCCAGGACCTGAACGCGCCTTCTGATTGGGACAGCCGTGGGAAGGACAGT  
TATGAAACGAGTCAGCTGGATGACCAGAGTGTGAAACCCACAGCCACAAGCAGTCCAGATTATATAAGC  
GGAAAGCCAATGATGAGAGCAATGAGCATTCCGATGTGATTGATAGTCAGGAACTTTCAAAGTCAGCCG  
TGAATTCACAGCCATGAATTTACAGCCATGAAGATATGCTGGTTGTAGACCCAAAAGTAAGGAAGAA  
GATAAACACCTGAAATTTCTGATTTCTCATGAATTAGATAGTGATCTTCTGAGGTCAT

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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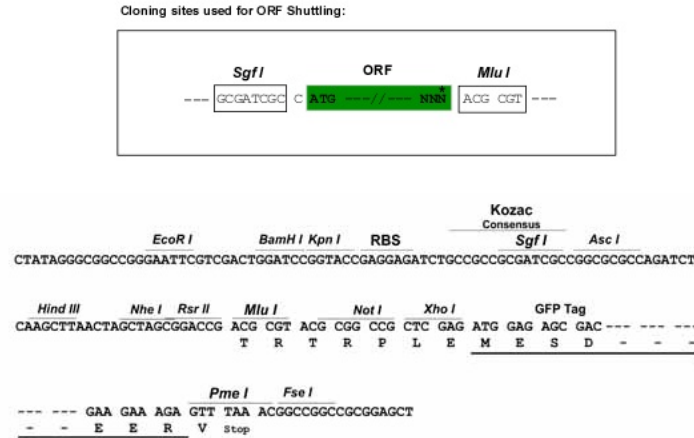
**Protein Sequence:** >RG205118 representing NM\_000582  
Red=Cloning site Green=Tags(s)

MRIAVICFLLGITCAIPVKQADSGSSEEKQLYNKYPDAVATWLNPDPSQKQNLAPQTLPSKSNESH  
 MDDMDEDDDDHVDSQDSIDSNSDDVDDTDDSHQSDSHHSDESELVDFPTDLPATEVFTPVVPTVD  
 TYDGRGDSVVYGLRSKSKKFRRPDIQYPDATDEDITSHMESEELNGAYKAIPVAQDLNAPSDWDSR  
 GKDSEYTSQLDDQSAETHSHKQSRLYKRKANDESNEHSDVIDSQELSKVSREFHSHEFHSHEDMLV  
 VDPKSKKEEDKHLEKFRISHELDSASSEVN

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000582

**ORF Size:** 900 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\\_000582.2](#), [NP\\_000573.1](#)

**RefSeq Size:** 1616 bp

**RefSeq ORF:** 903 bp

**Locus ID:** 6696

**UniProt ID:** [P10451](#)

**Cytogenetics:** 4q22.1

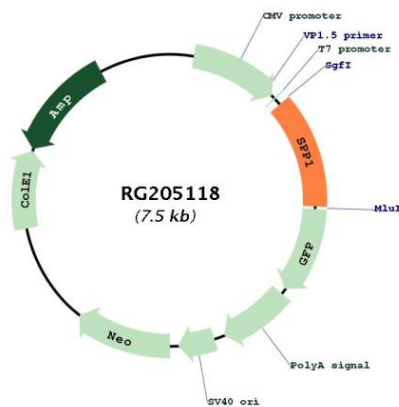
**Domains:** OSTEO

**Protein Families:** Druggable Genome, Secreted Protein

**Protein Pathways:** ECM-receptor interaction, Focal adhesion, Toll-like receptor signaling pathway

**Gene Summary:** The protein encoded by this gene is involved in the attachment of osteoclasts to the mineralized bone matrix. The encoded protein is secreted and binds hydroxyapatite with high affinity. The osteoclast vitronectin receptor is found in the cell membrane and may be involved in the binding to this protein. This protein is also a cytokine that upregulates expression of interferon-gamma and interleukin-12. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2011]

**Product images:**



Circular map for RG205118