

## Product datasheet for **RC204803**

### Osteopontin (SPP1) (NM\_001040058) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Osteopontin (SPP1) (NM_001040058) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Osteopontin
Synonyms:	BNSP; BSPI; ETA-1; OPN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204803 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGAGAATTGCAGTGATTTGCTTTTGCCTCCTAGGCATCACCTGTGCCATACCAGTTAACAGGCTGATT  
CTGGAAGTTCTGAGGAAAAGCAGCTTTACAACAAATACCCAGATGCTGTGGCCACATGGCTAAACCTGA  
CCCATCTCAGAAGCAGAATCTCCTAGCCCCACAGAATGCTGTGCCTCTGAAGAAACCAATGACTTTAA  
CAAGAGACCTTCCAAGTAAGTCCAACGAAAGCCATGACCACATGGATGATATGGATGATGAAGATGATG  
ATGACCATGTGGACAGCCAGGACTCCATTGACTCGAAGACTCTGATGATGTAGATGACTGATGATTC  
TCACCAGTCTGATGAGTCTCACCATTCTGATGAATCTGATGAACTGGTCACTGATTTTCCACGGACCTG  
CCAGCAACCGAAGTTTTCACTCCAGTTGTCCCCACAGTAGACACATATGATGGCCGAGGTGATAGTGTGG  
TTTATGGACTGAGGTCAAATCTAAGAAGTTTCGACAGCTGACATCCAGTACCCTGATGCTACAGACGA  
GGACATCACCTCACACATGGAAGCGAGGAGTTGAATGGTGATACAAGGCCATCCCCGTTGCCAGGAC  
CTGAACGCGCCTTCTGATTGGGACAGCCGTGGGAAGGACGTTATGAAACGAGTCAGCTGGATGACCAGA  
GTGCTGAAACCCACAGCCACAAGCAGTCCAGATTATATAAGCGGAAAGCCAATGATGAGAGCAATGAGCA  
TTCCGATGTGATTGATAGTCAGGAATTTCCAAAGTCAGCCGTGAATTCACAGCCATGAATTTACAGC  
CATGAAGATATGCTGGTTGTAGACCCCAAAAGTAAGGAAGAAGATAAACACCTGAAATTTCTGATTTCTC  
ATGAATTAGATAGTGCATCTTCTGAGGTCAAT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



[View online »](#)

**Protein Sequence:** >RC204803 protein sequence  
Red=Cloning site Green=Tags(s)

MRIAVICFLLGITCAIPVKQADSGSSEEKQLYNKYPDVATWLNPDPSQKQNLAPQNAVSSSEETNDFK  
 QETLPSKSNESHDMDDMDEDDDDHVDSQDSIDSNSDDVDVDDTDDSHQSDSHHSDESDELVTDFPTDL  
 PATEVFTPVVPTVDTYDGRGDSVYVGLRSKSKKFRPDIQYPDATDEEDITSHMESEELNGAYKAIQVQD  
 LNAPSDWDSRGKDSYETSQLDDQSAETHSHKQSRLYKRKANDESNEHSDVIDSQELSKVSRFHSHEFHHS  
 HEDMLVDPKSKKEDKHLKFRISHIELDSASSEVN

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6421\\_b01.zip](https://cdn.origene.com/chromatograms/mk6421_b01.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001040058

**ORF Size:** 942 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_001040058.2](#)

**RefSeq Size:** 1641 bp

**RefSeq ORF:** 945 bp

**Locus ID:** 6696

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

**Cytogenetics:** 4q22.1

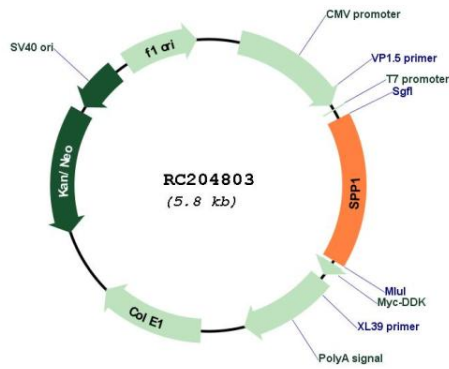
**Protein Families:** Druggable Genome, Secreted Protein

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

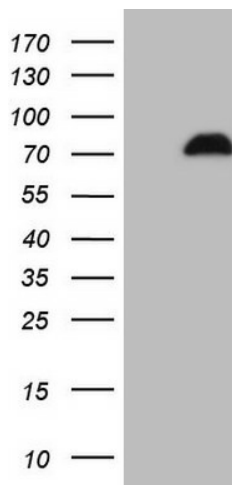
**MW:** 35.4 kDa

**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]

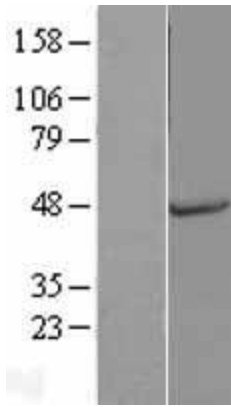
Product images:



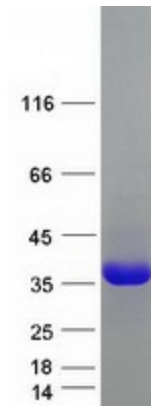
Circular map for RC204803



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SPP1 (Cat# RC204803, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-SPP1 (Cat# [TA806784]). Positive lysates [LY421887] (100ug) and [LC421887] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY421887]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204803 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SPP1 protein (Cat# [TP304803]). The protein was produced from HEK293T cells transfected with SPP1 cDNA clone (Cat# RC204803) using MegaTran 2.0 (Cat# [TT210002]).