

## Product datasheet for RC222901

### Bone Sialoprotein (IBSP) (NM\_004967) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Bone Sialoprotein (IBSP) (NM_004967) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Bone Sialoprotein
Synonyms:	BNSP; BSP; BSP-II; SP-II
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC222901 representing NM_004967. Blue=ORF Red=Cloning site Green=Tag(s)

```
GCTCGTTTGTAGTGAACCGTCAGAATTTTGTAAACGACTACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC
ATGAAGACTGCTTTAATTTTGTCTCAGCATTGGGAATGGCCTGTGCTTTCTCAATGAAAAATTTGCAT
CGAAGAGTCAAAATAGAGGATTCTGAAGAAAAATGGGGTCTTTAAGTACAGGCCACGATATTATCTTTAC
AAGCATGCCTACTTTTATCCTCATTTAAAACGATTTCCAGTTCAGGGCAGTAGTGACTCATCCGAAGAA
AATGGAGATGACAGTTCAGAAGAGGAGGAGGAAGAAGAGGAGACTTCAAATGAAGGAGAAAAACAATGAA
GAATCGAATGAAGATGAAGACTCTGAGGCTGAGAATACCACACTTCTGCTACAACACTGGGCTATGGA
GAGGACGCCACGCTGGCACAGGGTATACAGGGTTAGCTGCAATCCAGCTTCCCAAGAAGGCTGGGGAT
ATAACAAATAAAGCTACAAAAGAGAAGGAAAGTGATGAAGAAGAAGAGGAGGAAGAGGAAGGAAATGAA
AACGAAGAAAGCGAAGCAGAAGTGGATGAAAACGAACAAGGCATAAACCGCACCACTACCAACAGCACA
GAGGCAGAAAACGGCAACGGCAGCAGCGGAGGAGACAAATGGAGAAGAAGGGGAAGAAGAAAGTGTCACT
GGAGCCAATGCAGAAGACACCACAGAGACCGGAAGGCAGGGCAAGGGCACCTCGAAGACAACAACCTCT
CCAAATGGTGGGTTTGAACCTACAACCCACCACAAGTCTATAGAACCCTTCCCACCTTTTGGGAAA
ACCACCACCGTTGAATACGAGGGGGAGTACGAATACACGGGCGCCAATGAATACGACAATGGATATGAA
ATCTATGAAAGTGAGAACGGGAACTCGTGGGACAATTACCGAGCCTATGAAGATGAGTACAGCTAC
TTTAAAGGACAAGGCTACGATGGCTATGATGGTCAGAATTACTACCACCACAG
ACGCGTACGCGGCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```



[View online »](#)

**Protein Sequence:** >Peptide sequence encoded by RC222901  
 Blue=ORF Red=Cloning site Green=Tag(s)

MKTALILLILGMACAFSMKNLHRRVKIEDSEENGVFYRPRYYLYKHAYFYPHLKRFPVQGSSDSSEE  
 NGDSSSEEEEEETSNEGENNEESNEDEDSEANTTLSATTLGYGEDATPGTYGLAAIQLPKKAGD  
 ITNKATKEKESDEEEEEEGNENEESEAEVDENEQINGTSTNSTEAENGNSSGGDNGEEGEEESVT  
 GANAEDTTETGRQKGTSKTTTTSPNGGFPTTPPQVYRTTSPPFKTTTTVEYEGEYETGANEYDNGYE  
 IYESENGEPRGDNYRAYEDEYSYFKGQYDGYDGQNYHHQ  
 TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk8008\\_c04.zip](https://cdn.origene.com/chromatograms/mk8008_c04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_004967

**ORF Size:** 951 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\\_004967.4](#)

**RefSeq Size:** 1108 bp

**RefSeq ORF:** 954 bp

**Locus ID:** 3381

**UniProt ID:** [P21815](#)

**Cytogenetics:** 4q22.1

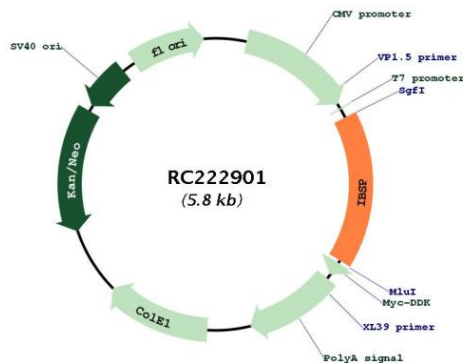
**Protein Families:** Druggable Genome, Secreted Protein

**Protein Pathways:** ECM-receptor interaction, Focal adhesion

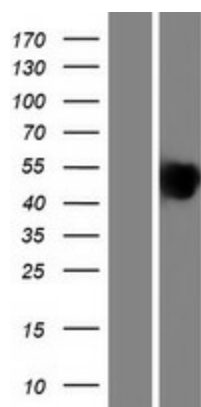
**MW:** 35.1 kDa

**Gene Summary:** The protein encoded by this gene is a major structural protein of the bone matrix. It constitutes approximately 12% of the noncollagenous proteins in human bone and is synthesized by skeletal-associated cell types, including hypertrophic chondrocytes, osteoblasts, osteocytes, and osteoclasts. The only extraskeletal site of its synthesis is the trophoblast. This protein binds to calcium and hydroxyapatite via its acidic amino acid clusters, and mediates cell attachment through an RGD sequence that recognizes the vitronectin receptor. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC222901



Western blot validation of overexpression lysate (Cat# [LY417619]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222901 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).