Recombinant Human SPP1 protein, His-tagged

Cat. No. SPP1-336H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SPP1 protein (Ile17-Asn300), fused to His tag at C-terminus, was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	284
Description	Osteopontin (OPN) is also known as Secreted phosphoprotein 1 (SPP1), Bone sialoprotein 1, Nephropontin, Urinary stone protein, Uropontin, BNSP, which belongs to the osteopontin family. OPN/SPP1 is a highly negatively charged, extracellular matrix protein that lacks an extensive secondary structure. Full length OPN (OPN-FL) can be modified by thrombin cleavage, which exposes a cryptic sequence, SVVYGLR on the cleaved form of the protein known as OPN-R. Osteopontin/SPP-1 is biosynthesized by a variety of tissue types. OPN is the ligand for integrin alpha-V/beta-3. OPN/SPP1 binds tightly to hydroxyapatite and appears to form an integral part of the mineralized matrix. OPN/SPP1 probably important to cell-matrix interaction. OPN/SPP1 acts as a cytokine involved in enhancing production of interferon-gamma and interleukin-12 and reducing production of interleukin-10 and is essential in the pathway that leads to type I immunity.
Form	Lyophilized from 0.22 um filtered solution in PBS, pH7.4, 10% trehalose.
Molecular Mass	The protein has a calculated MW of 33 kDa. The protein migrates as 60-65 kDa under

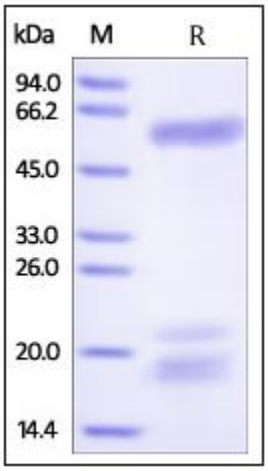
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	reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>80% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4℃ before opening to recover the entire contents.

GENE INFORMATION

Gene Name	SPP1
Official Symbol	SPP1
Synonyms	SPP1; secreted phosphoprotein 1; BNSP, bone sialoprotein I , OPN, osteopontin; osteopontin; BSPI; early T lymphocyte activation 1; ETA 1; uropontin; nephropontin; osteopontin-C; osteopontin-D; SPP1/CALPHA1 fusion; bone sialoprotein 1; urinary stone protein; early T-lymphocyte activation 1; osteopontin/immunoglobulin alpha 1 heavy chain constant region fusion protein; secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1); OPN; BNSP; ETA-1; MGC110940
Gene ID	6696

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mRNA Refseq	NM_000582
Protein Refseq	NP_000573
MIM	166490
UniProt ID	P10451
SDS-PAGE of SPP1-336H	 Human OPN, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 80%.

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