

Active Recombinant Human Secreted Phosphoprotein 1

Cat. No. SPP1-5130H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human SPP1 expressed by 293 cells is a 60-65 kDa Osteopontin protein.
Species	Human
Source	Human
Description	SPP1 is a secreted glycoprotein that functions as a ligand to α v β 3 integrin and possibly other receptors. It binds tightly to hydroxyapatite and can act as a structural component of the extracellular mineralized matrix. SPP1 is initially secreted as a 298 amino acid protein, which is subject to multiple post-translational modifications including glycosylation, phosphorylation, and specific proteolytic cleavages into various smaller molecular weight fragments.
Form	Supplied as lyophilized powder. Reconstitute in water to a concentration of 0.1-1.0 mg/ml.
Purity	> 97% pure by SDS PAGE and HPLC
Sequence	Region of Osteopontin protein corresponding to amino acids IPVKQADSGS SEEKQLYNKY PDAVATWLNP DPSQKQNLLAPQNAVSSSEET NDFKQETLPS KSNESH DHMD DMDDEDDDDH VDSQDSIDSN DSDDVDDTDD SHQSDESHHSDESDELVTDF PTDLPATEVF TPVVPTVD TY DGRGDSV VYG LRSKSKK FRR PDIQYPDATD EDITSHMES
Molecular Mass	60-65 kDa

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Endotoxin Levels	Endotoxin level is less than 0.1 ngper ug (1 EU/ug).
Bioactivity	Determined by its ability tochemoattract human monocytes using a concentration range of 10.0-100.0 ng/ml.
Applications	Numerous applications are possiblewith this product and should be tested by the end user under their ownlaboratory conditions.
Storage	Store at 4 deg Cuntil reconstitution. Following reconstitution aliquot and freeze at -20 degC for long term storage. Avoid repeated freeze/thaw cycles.
OfficialSymbol	SPP1

GENE INFORMATION

Gene Name	SPP1 secreted phosphoprotein 1 [Homo sapiens]
Synonyms	SPP1; secretedphosphoprotein 1; OPN; BNSP; BSPI; ETA-1; MGC110940; osteopontin; SPP-1; Uropontin; Nephropontin; osteopontin-C;osteopontin-D; OTTHUMP00000161173; OTTHUMP00000161174; OTTHUMP00000218555; OTTHUMP00000218556;SPP1/CALPHA1 fusion; bone sialoprotein 1; bone sialoprotein I; urinary stoneprotein; early T-lymphocyte activation 1; secreted phosphoprotein-1(osteopontin, bone sialoprotein); osteopontin/immunoglobulin alpha 1 heavychain constant region fusion protein; secreted phosphoprotein 1 (osteopontin,bone sialoprotein I, early T-lymphocyte activation 1)
Gene ID	6696
mRNA Refseq	NM_000582
Protein Refseq	NP_000573

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MIM	166490
UniProt ID	P10451
Chromosome Location	4q22.1
Pathway	Direct p53 effectors;ECM-receptor interaction; Endochondral Ossification; FGF signaling pathway;Focal Adhesion; Integrin cell surface interactions; Osteoclast Signaling;Osteopontin Signaling; Osteopontin-mediated events; Signaling by PDGF; TGFBeta Signaling Pathway; Toll-like receptor signaling pathway
Function	cytokineactivity; extracellular matrix binding
Rendering based on PDB 3CXD.	