

Recombinant Human Osteopontin/SPP1 Protein (His Tag)



Catalog Number: PKSH032000

Note: Centrifuge before opening to ensure complete recovery of vial contents.

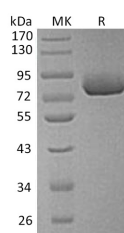
Description

Synonyms	Osteopontin; Bone Sialoprotein 1; Nephropontin; Secreted Phosphoprotein 1; SPP-1; Urinary Stone Protein; Uropontin; SPP1; BNSP; OPN
Species	Human
Expression Host	HEK293 Cells
Sequence	Ile17-Asn314
Accession	P10451
Calculated Molecular Weight	34.8 kDa
Observed molecular weight	60-70 kDa
Tag	C-His

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Secreted Phosphoprotein 1 (SPP1) is a secreted multifunctional glycoprotein. Its putative functions include roles in bone metabolism, immune regulation, wound healing, cell survival, and tumor progression. Based on gene structure and chromosomal location, SPP1 is a member of the small integrin-binding ligand N-linked glycoprotein (SIBLING) family that also includes bone sialoprotein (BSP), dentin matrix protein 1 (DMP1), dentin sialophosphoprotein (DSPP), enamelin (ENAM), and matrix extracellular phosphoglycoprotein (MEPE). SPP1 is expressed in bone, although it is also expressed in other tissues. SPP1 acts as a cytokine that is involved in enhancing production of interferon-gamma and interleukin-12 and reducing production of interleukin-10. It is essential in the pathway that leads to type I immunity. Osteopontin has

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been implicated as an important factor in bone remodeling. Specifically, research suggests it plays a role in anchoring osteoclasts to the mineral matrix of bones. The fact that SPP1 interacts with multiple cell surface receptors which are ubiquitously expressed makes it an active player in many physiological and pathological processes including wound healing, bone turnover, tumorigenesis, inflammation and ischemia. Therefore, manipulation of plasma Osteopontin levels may be useful in the treatment of autoimmune diseases, cancer metastasis, osteoporosis and some forms of stress.

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