



Synonym

SPP1, BNBP, OPN, Uropontin, Nephropontin, Osteopontin, BSP-1, ETA-1, BSPI

Source

Human Osteopontin, His Tag, premium grade(OPN-H5227) is expressed from human 293 cells (HEK293). It contains AA Ile 17 - Asn 300 (Accession # [AAH07016](#)).

Predicted N-terminus: Ile 17

It is produced under our rigorous quality control system that incorporates a comprehensive set of tests including sterility and endotoxin tests. Product performance is carefully validated and tested for compatibility for cell culture use or any other applications in the early preclinical stage. When ready to transition into later clinical phases, we also offer a custom GMP protein service that tailors to your needs. We will work with you to customize and develop a GMP-grade product in accordance with your requests that also meets the requirements for raw and ancillary materials use in cell manufacturing of cell-based therapies.

Molecular Characterization

OPN(Ile 17 - Asn 300)
AAH07016 Poly-his

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 33.0 kDa. The protein migrates as 12 kDa, 18 kDa and 45-55 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 0.1 EU per µg by the LAL method.

Sterility

Negative

Mycoplasma

Negative.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

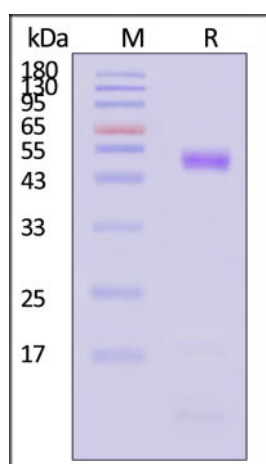
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human Osteopontin, His Tag, premium grade on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

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Background

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.

Clinical and Translational Updates

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