Biotinylated Mouse Osteopontin (OPN) Protein, His,Avitag™ (MALS verified)

Catalog # OPN-M82E8

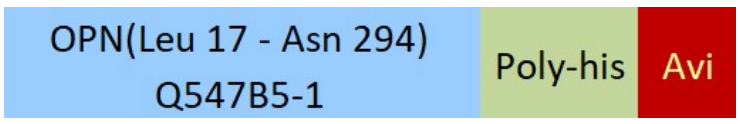
Synonym

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

Source

Biotinylated Mouse Osteopontin, His,Avitag (OPN-M82E8) is expressed from human 293 cells (HEK293). It contains AA Leu 17 - Asn 294 (Accession # Q547B5-1).
Predicted N-terminus: Leu 17

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 34.3 kDa. The protein migrates as 45-55 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Biotinylation

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotin:Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.2 M Arginine, pH7.4. Normally trehalose is added as protectant before lyophilization.

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.

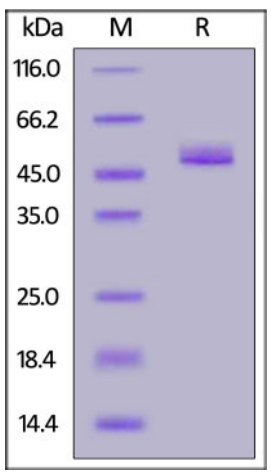
Storage

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



Biotinylated Mouse Osteopontin, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.