Recombinant Human Osteopontin/OPN

#R00569

Size: 10 μg/100 μg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Osteopontin (OPN), also known as SPP1, Eta-1, or BSP, is a highly acidic, 45-75 kDa secreted molecule in the SIBLING family of matricellular proteins. It can be variably modified with O- and N-glycosylation, sulfation, phosphorylation, and transglutamination. OPN binds several integrins and can bind additional integrins after it is proteolytically cleaved. OPN is prominently expressed in mineralized tissues. It inhibits bone mineralization and kidney stone formation and promotes inflammation, cell adhesion, and cell migration. OPN expression is upregulated during inflammation, obesity, atherosclerosis, cancer, and tissue damage, and it contributes to the pathophysiology of these conditions.

AA Sequence

Ile17-Asn300,withaC-terminal6-Histag;Accession#NP_000573.1

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile PBS to a concentration of 0.1 mg/ml. Further dilutions should be made in appropriately buffered solutions.

Product Specification

Species	Human
Source	NS0 Cells
Molecular Weight	Apparent molecular mass of 60-65 kDa in SDS-PAGE under reducing conditions, a single glycosylated polypeptide protein consisting of 290 amino acids including a C-terminal 6× polyhistidine tag.
Purity	> 95 % by SDS-PAGE analyses.
Biological Activity	Measured by the ability of the immobilized protein to support the adhesion of HEK293 human embryonic kidney cells. When 1 × 10^5 cells/well are added to a rHuOsteopontin/OPN coated plate, cell adhesion is enhanced in a dosedependent manner

	after 1 hour incubation at 37 °C. The ED_{50} for this effect is typically 0.1-0.6 μg/mL. rHuThrombin proteolytic treatment of this rHuOsteopontin can increase HEK293 cell adhesion by about 5-fold.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from 0.2 μm filtered concentrated solution in PBS, pH 7.2.
Endotoxin	Less than 0.1 EU/μg of rHuOsteopontin/OPN as determined by LAL method.