ChemWhat
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Recombinant Human Osteopontin/OPN (rHuOsteopontin/OPN)

ChemWhat Technical Data Sheet (TDS)

Catalog Number:	606-03
Source:	*Mouse myeloma cell line, NS0*
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.
Quantity:	10μg/50μg/100μg
AA Sequence:	Ile17-Asn300, with a C-terminal 6-His tag; Accession # NP_000573.1
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.
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.
Shipping:	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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.
Usage:	**ChemWhat Limited in UK offers this branded product for research, development or further** evaluation purposes. **NOT FOR HUMAN USE**.

Human Osteopontin/OPN

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.