

Osteopontin/OPN Protein, Rat (CHO, His)

Cat. No.:	HY-P79222
Synonyms:	Osteopontin; Spp1; Bone sialoprotein 1; Secreted phosphoprotein 1; SPP-1; 2b7; Secreted Phosphoprotein 1 [BNSP]
Species:	Rat
Source:	CHO
Accession:	P08721 (L17-N317)
Gene ID:	25353
Molecular Weight:	approximately 34.83 kDa

PROPERTIES

AA Sequence	<pre> L P V K V A E F G S S E E K A H Y S K H S D A V A T W L K P D P S Q K Q N L L A P Q N S V S S E E T D D F K Q E T L P S N S N E S H D H M D D D D D D D D D G D H A E S E D S V N S D E S D E S H H S D E S D E S F T A S T Q A D V L T P I A P T V D V P D G R G D S L A Y G L R S K S R S F P V S D E Q Y P D A T D E D L T S R M K S Q E S D E A I K V I P V A Q R L S V P S D Q D S N G K T S H E S S Q L D E P S V E T H S L E Q S K E Y K Q R A S H E S T E Q S D A I D S A E K P D A I D S A E R S D A I D S Q A S S K A S L E H Q S H E F H S H E D K L V L D P K S K E D D R Y L K F R I S H E L E S S S S E V N </pre>
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 Recombinant Rat Osteopontin/OPN coated plates, cell adhesion is enhanced in a dose dependent manner after 1 hour incubation at 37°C. The ED ₅₀ for this effect is 1.281 µg/ml, corresponding to a specific activity is 780.640 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

Osteopontin (OPN) protein, a significant non-collagenous bone protein, tightly binds to hydroxyapatite and plays a crucial role in the mineralized matrix. It is likely essential for facilitating interactions between cells and the extracellular matrix. Furthermore, OPN acts as a cytokine, promoting the production of interferon-gamma and interleukin-12, while inhibiting the production of interleukin-10. These functions are vital in the pathway that leads to type I immunity.

Caution: Product has not been fully validated for medical applications. For research use only.

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