

## Osteopontin/OPN Protein, Mouse (P.pastoris, His)

<b>Cat. No.:</b>	HY-P71786
<b>Synonyms:</b>	Spp1; Eta-1; Op; Spp-1; Osteopontin; 2AR; Minopontin; Secreted phosphoprotein 1; SPP-1
<b>Species:</b>	Mouse
<b>Source:</b>	P. pastoris
<b>Accession:</b>	P10923 (L17-S290)
<b>Gene ID:</b>	20750
<b>Molecular Weight:</b>	Approximately 60 kDa in reducing SDS-PAGE due to glycosylation.

### PROPERTIES

<b>AA Sequence</b>	<pre> L P V K V T D S G S   S E E K L Y S L H P   D P I A T W L V P D   P S Q K Q N L L A P Q N A V S S E E K 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 D G D H A E S E D S V D S   D E S D E S H H S D   E S D E T V T A S T   Q A D T F T P I V P T V D V P N G R G D   S L A Y G L R S K S   R S F Q V S D E Q Y   P D A T D E D L T S H M K S G E S K E S   L D V I P V A Q L L   S M P S D Q D N N G   K G S H E S S Q L D E P S L E T H R L E   H S K E S Q E S A D   Q S D V I D S Q A S   S K A S L E H Q S H K F H S H K 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                 </pre>
<b>Biological Activity</b>	Measured by the ability of the immobilized protein to support the adhesion of HEK293 human embryonic kidney cells. When $1 \times 10^5$ 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 <sub>50</sub> for this effect is 0.5101 µg/mL, corresponding to a specific activity is $1.960 \times 10^4$ units/mg.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	Osteopontin (OPN) protein, a vital non-collagenous bone protein, demonstrates a strong affinity for hydroxyapatite and
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serves as an integral component of the mineralized matrix. It likely plays a crucial role in facilitating interactions between cells and the extracellular matrix. Additionally, OPN acts as a cytokine, effectively stimulating the production of interferon-gamma and interleukin-12, while simultaneously suppressing the production of interleukin-10. These functions are essential in the pathway that promotes type I immunity.

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

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