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## **Recombinant mouse Osteopontin/OPN protein**

Catalog Number: ATGP4052

## **PRODUCT INFORMATION**

## **Expression system**

**HEK293** 

#### **Domain**

17-294aa

#### UniProt No.

P10923

#### **NCBI Accession No.**

NP 033289.2

#### **Alternative Names**

secreted phosphoprotein 1, 2AR, Ap1-1, BNSP, Bsp, BSP1, Eta, ETA-1, mi, OP, Opn, Opn1, Spp-1, osteopontine isoform 4, Bone sialoprotein 1, Calcium oxalate crystal growth inhibitor protein, Early T-lymphocyte activation 1 protein, Minopontin, Osteoponitin, Spp1

## **PRODUCT SPECIFICATION**

## **Molecular Weight**

31.8kDa (287aa)

#### Concentration

0.25mg/ml (determined by Absorbance at 280nm)

#### **Formulation**

Liquid. In Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

#### **Purity**

>90% by SDS-PAGE

#### **Endotoxin level**

< 1 EU per 1ug of protein (determined by LAL method)

## **Biological Activity**

Measured by the ability of the immobilized protein to support the adhesion of HEK293 human embryonic kidney cells. When cells are added to mouse SPP1 coated plates. The ED50 range  $\leq 1.5$  ug/ml.

#### **Tag**

His-Tag

#### **Application**

SDS-PAGE, Bioactivity

## **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.



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#### **BACKGROUND**

### **Description**

Osteopontin, also known as SPP1, is major non-collagenous bone protein that binds tightly to hydroxyapatite. This protein appears to form an integral part of the mineralized matrix. It inhibits bone mineralization and kidney stone formation, and promotes inflammation and cell ad-hesion and migration. Osteopontin acts as a cytokine involved in enhancing production of interferon-gamma and interleukin-12 and reducing production of interleukin-10. Also it is essential in the pathway that leads to type 1 immunity. It is expressed and secreted by various cells, and has a role in cell adhesion, chemotaxis, prevention of apoptosis, invasion, migration and anchorage-independent growth of tumor cells. Recombinant mouse Osteopontin, fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

## **Amino acid Sequence**

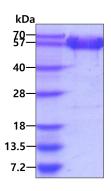
<DGS>LPVKVTD SGSSEEKLYS LHPDPIATWL VPDPSQKQNL LAPQNAVSSE EKDDFKQETL PSNSNESHDH MDDDDDDDD DGDHAESEDS VDSDESDESH HSDESDETVT ASTQADTFTP IVPTVDVPNG RGDSLAYGLR SKSRSFQVSD EQYPDATDED LTSHMKSGES KESLDVIPVA QLLSMPSDQD NNGKGSHESS QLDEPSLETH RLEHSKESQE SADQSDVIDS QASSKASLEH QSHKFHSHKD KLVLDPKSKE DDRYLKFRIS HELESSSSEV N<HHHHHHH>

#### **General References**

Icer MA, et al, (2018) Clin Biochem. 51:17-24. Kaleta B. (2019) Inflamm Res. 68:93-102. Lamort AS, et al, (2019) Cells. 8:815.

#### **DATA**

## **SDS-PAGE**



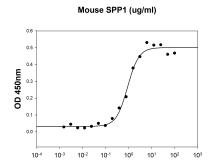
3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

## **Biological Activity**



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Mouse SPP1 stimulates cell adhesion of the HEK293 human embryonic kidney cells. The ED50 range  $\leq 1.5$  ug/ml.

