

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, Osteopontin, 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 adhesion 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

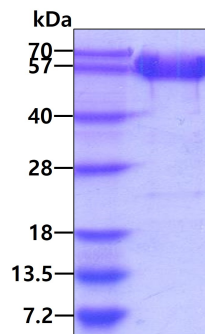
<DGS>LPVKVTD SGSSEEKLYS LHPDPIATWL VPDPSQKQNL LAPQNAVSSSE EKDDFKQETL PSNSNESH DH
MDDDDDDDDDD DGDHAESEDS VDSDESDESH HSESDSETVT ASTQADTF TP IVPTVDV PNG RGDSLAYGLR
SKRSRFQVSD EQYPDATDED LTSHMKSGES KESLDVIPVA QLLSMPDSDQD NNGKGSHESS QLDEPSLETH RLEHSKESQE
SADQSDVIDS QASSKASLEH QSHKFHSHKD KLVLDPKSKE DDRYLKFRIS HELESSSSEV N<HHHHHH>

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 ≤ 1.5 ug/ml.

