

Rat secreted phosphoprotein 1 ELISA Kit | SPP1 elisa kit

Rat Osteopontin, OPN ELISA Kit

CATALOG #
AAA80540

REACTIVITY
Rat

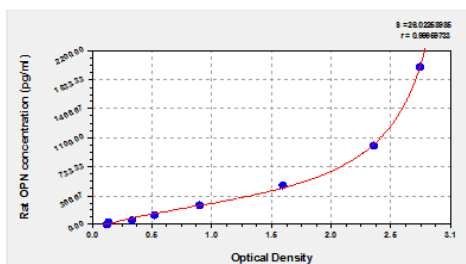
PRODUCT SYNONYMS

secreted phosphoprotein 1; Rat Osteopontin; OPN ELISA Kit; BNSP; BSPI; ETA-1; MGC110940; OPN; SPP1/CALPHA1 fusion; bone sialoprotein I; early T-lymphocyte activation 1; osteopontin; osteopontin/immunoglobulin alpha 1 heavy chain constant region fusion protein; s; SPP1 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Rat
Specificity	This assay has high sensitivity and excellent specificity for detection of Rat SPP1. No significant cross-reactivity or interference between Rat SPP1 and analogues was observed.
Sequence Length	314
Samples	Serum, plasma, cell culture supernates, tissue homogenates
Detection Range	31.25 pg/ml-2000 pg/ml
Sensitivity	7.8 pg/ml
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Detection Wavelength	450 nm
Sample Volume	50-100ul
Protein Biological Process 1	Biosynthesis/Metabolism
Protein Biological Process 3	Biomineralization
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for SPP1 elisa kit

Introduction: Osteopontin is a glycoprotein that was first identified in 1986 in osteoblasts. Osteopontin is an extracellular structural protein and therefore an organic component of bone. Synonyms for this protein include sialoprotein I and 44K BPP (bone phosphoprotein). Osteopontin is biosynthesized by a variety of tissue types including fibroblasts preosteoblasts, osteoblasts, osteocytes, odontoblasts, some bone marrow cells, hypertrophic chondrocytes, dendritic cells, macrophages, smooth muscle, skeletal muscle myoblasts, endothelial cells, and extraosseous(non-bone) cells in the inner ear, brain, kidney, deciduum, and placenta. Synthesis of osteopontin is stimulated by calcitriol (1,25-dihydroxy-vitamin D3). The protein is composed of about 300aa residues (297 in mouse; 314 in human) and has ~30 carbohydrate residues attached including 10 sialic acid residues, which are attached to the protein during post-translational modification in the Golgi apparatus. The protein is rich in acidic residues: 30-36% are either aspartic or glutamic acid. OPN is a highly negative charged, extracellular matrix protein that lacks an extensive secondary structure. OPN can go through posttranslational modifications which increase its apparent molecular weight to about 44 kDa.

Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to OPN. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific for OPN and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain OPN, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of OPN in the samples is then determined by comparing the O.D. of the samples to the standard curve.

NCBI AND UNIPROT INFORMATION

NCBI GI #	126723455
NCBI GeneID	100008982
NCBI Accession #	NP_001075663.1
NCBI GenBank Nucleotide #	NM_001082194.1
UniProt Accession #	P31097 ; P46631
Molecular Weight	35,172 Da
NCBI Official Full Name	osteopontin
NCBI Official Symbol	SPP1
NCBI Official Synonym Symbols	OPN
NCBI Protein Information	osteopontin; OC-1; SPP-1; bone sialoprotein 1; secreted phosphoprotein-1; secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1)
UniProt Protein Name	Osteopontin
UniProt Gene Name	SPP1
UniProt Synonym Gene Names	SPP-1
UniProt Entry Name	OSTP_RABIT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/spp1-rat-elisa-kits/secreted-phosphoprotein-1/80540>