Anti-Osteopontin Antibody

0806-8

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Zebrafish
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 35 kDa

Description: Osteopontin (OPN), also known as bone sialoprotein I (BSP-1 or BNSP), early T-lymphocyte activation (ETA-1), secreted phosphoprotein 1 (SPP1), 2ar and Rickettsia resistance (Ric),[5] is a protein that in humans is encoded by the SPP1 gene (secreted phosphoprotein 1). The murine ortholog is Spp1. Osteopontin is a SIBLING (glycoprotein) that was first identified in 1986 in osteoblasts. The prefix osteo- indicates that the protein is expressed in bone, although it is also expressed in other tissues. The suffix -pontin is derived from "pons," the Latin word for bridge, and signifies osteopontin's role as a linking protein. 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). The gene has 7 exons, spans 5 kilobases in length and in humans it is located on the long arm of chromosome 4 region 22 (4q1322.1). The protein is composed of ~300 amino acids residues 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.

Immunogen: Synthetic peptide within C-terminal Human Osteopontin.

Positive control: Human thymus tissue lysate, Human breast tissue, human colon cancer tissue.

Subcellular location: Secreted.

Database links: SwissProt: P10451 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:400

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

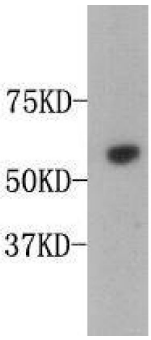

Fig1: Western blot analysis on human thymus tissue lysate using anti-Osteopontin polyclonal antibody.

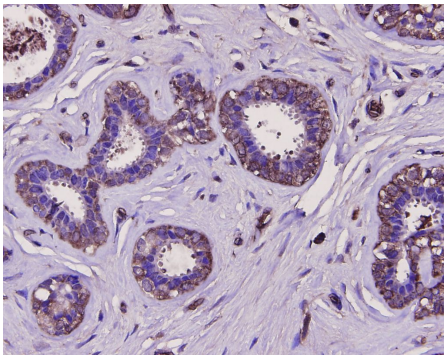

Fig2: Immunohistochemical analysis of paraffin-embedded human breast tissue using anti-Osteopontin antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (0806-8, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

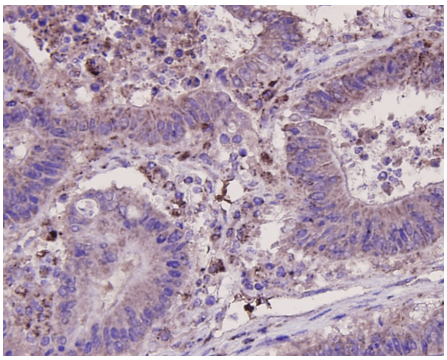

Fig3: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue using anti-Osteopontin antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (0806-8, 1/400) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Christensen B., Nielsen M.S., Haselmann K.F., Petersen T.E., Sorensen E.S.;"Post-translationally modified residues of native human osteopontin are located in clusters: identification of 36 phosphorylation and five O-glycosylation sites and their biological implications.";Biochem. J. 390:285-292(2005).
2. Crosby A.H., Edwards S.J., Murray J.C., Dixon M.J.;"Genomic organization of the human osteopontin gene: exclusion of the locus from a causative role in the pathogenesis of dentinogenesis imperfecta type II.";Genomics 27:155-160(1995).