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Datasheet for 600-401-ET6

SPP1 Antibody

Overview

Description:	Anti-SPP1 (RABBIT) Antibody - 600-401-ET6
Item No.:	600-401-ET6
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat
Host Species:	Rabbit

Product Details

Background:	The secreted protein 1 (SPP1), also known as osteopontin, is a major noncollagenous protein of bone, but is also found in the extracellular matrix of other mineralized tissues and in bodily fluids. In bone, SPP1 is produced by osteoblasts, osteocytes, macrophages, and osteoclasts (1,2). SPP1 binds to cells through integrin and non-integrin receptors, as well as the adhesion receptor CD44 in an RGD-independent manner, enabling SPP1 to induce a number of functional effects including macrophage chemotaxis, cytoprotection, and regulation of T helper type 1 cells (2). SPP1 can regulate biomineralization by inhibiting the formation of hydroxyapatite (3) and the growth of calcium oxalate crystals (4).
Synonyms:	SPP1 Antibody, OPN, BNSP, BSPI, ETA-1, OPN, PSEC0156, Osteopontin, Bone sialoprotein 1, SPP-1
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	SPP1
Reactivity:	Human, Mouse, Rat
Immunogen Type:	Conjugated Peptide
Immunogen:	Anti-SPP1 antibody was prepared from whole rabbit serum produced by repeated immunizations with an 18 amino acid peptide near the N-terminus of human SPP1.

Purity/Specificity:	Anti-SPP1 Antibody is Protein A purified. SPP1 antibody is human, mouse and rat reactive. Multiple isoforms of SPP1 are known to exist.
Relevant Links:	• UniProtKB - P10451 • GeneID - 6696 • NCBI - NP_000573.1

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-SPP1 Antibody has been tested for use in ELISA, Western Blotting, Immunohistochemistry and Immunofluorescence. Specific conditions for reactivity should be optimized by the end user. Expect a band at approximately 35 kDa in Western Blots of specific cell lysates and tissues.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000-1:20,000
IF:	User Optimized
IHC:	User Optimized
WB:	1-2 µg/mL

Formulation

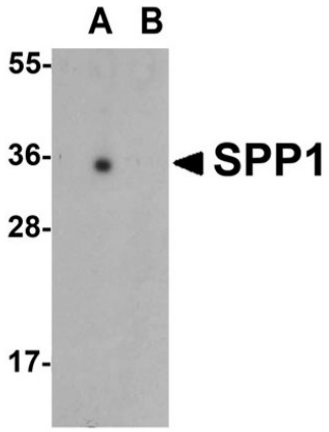
Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.01 M Sodium Phosphate, 0.25 M Sodium Chloride, pH 7.2
Preservative:	0.02% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

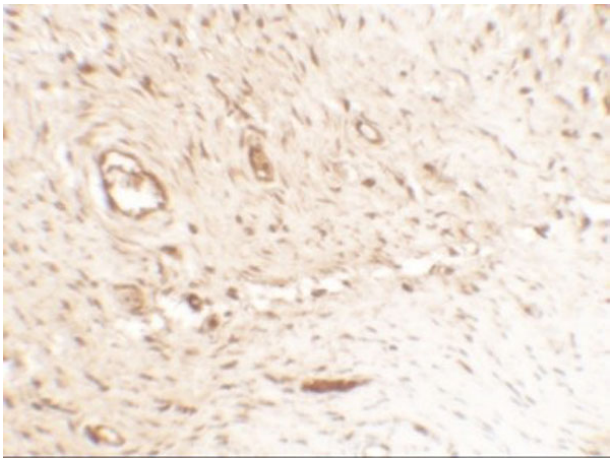
Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Expiration: Expiration date is one (1) year from date of receipt.

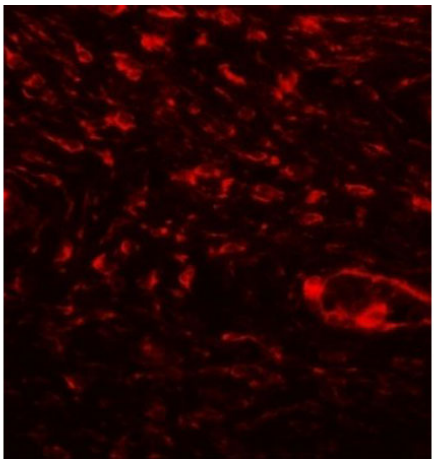
Images



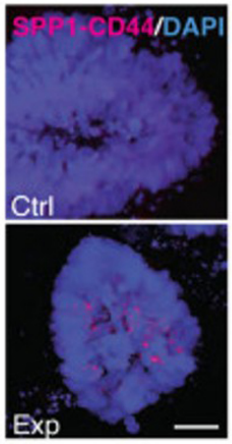
Western Blot
Western blot of SPP1.
Load: human bladder tissue lysate.
Primary Antibody: SPP1 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry
Immunohistochemistry of SPP1.
Tissue: human bladder tissue.
Primary Antibody: SPP1 antibody at 5 µg/mL.



Immunofluorescence Microscopy
Immunofluorescence of SPP1.
Tissue: human bladder tissue.
Primary Antibody: SPP1 antibody at 20 µg/mL.



Immunofluorescence Microscopy
J) Proximity-ligation assay (PLA) performed in tumoroid-macrophage coculture (n = 3). Red dots indicate SPP1-CD44 interactions (Scale = 50 µm). In all panels, *p ≤ 0.05; **p ≤ 0.01; ***p ≤ 0.001; ****p ≤ 0.0001; ns: p > 0.05. Source data are provided as a Source Data file. Fig 6. PMID: 38036590

References

- Li N et al. Mapping and modeling human colorectal carcinoma interactions with the tumor microenvironment. *Nat Commun.* (2023)

Disclaimer

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