10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ASPN Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6604C

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q9BXN1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19725
Calculated MW	43417
Antigen Region	242-269

Additional Information

Gene ID	54829
Other Names	Asporin, Periodontal ligament-associated protein 1, PLAP-1, ASPN, PLAP1, SLRR1C
Target/Specificity	This ASPN antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 242-269 amino acids from the Central region of human ASPN.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ASPN Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ASPN
Synonyms	PLAP1, SLRR1C

Function	Negatively regulates periodontal ligament (PDL) differentiation and mineralization to ensure that the PDL is not ossified and to maintain homeostasis of the tooth-supporting system. Inhibits BMP2-induced cytodifferentiation of PDL cells by preventing its binding to BMPR1B/BMP type-1B receptor, resulting in inhibition of BMP-dependent activation of SMAD proteins (By similarity). Critical regulator of TGF-beta in articular cartilage and plays an essential role in cartilage homeostasis and osteoarthritis (OA) pathogenesis. Negatively regulates chondrogenesis in the articular cartilage by blocking the TGF-beta/receptor interaction on the cell surface and inhibiting the canonical TGF-beta/Smad signal. Binds calcium and plays a role in osteoblast-driven collagen biomineralization activity.
Cellular Location	Secreted, extracellular space, extracellular matrix
Tissue Location	Higher levels in osteoarthritic articular cartilage, aorta, uterus. Moderate expression in small intestine, heart, liver, bladder, ovary, stomach, and in the adrenal, thyroid, and mammary glands. Low expression in trachea, bone marrow, and lung Colocalizes with TGFB1 in chondrocytes within osteoarthritic (OA) lesions of articular cartilage.

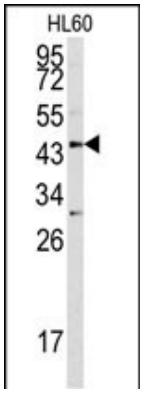
Background

ASPN belongs to a family of leucine-rich repeat (LRR) proteins associated with the cartilage matrix. The name asporin reflects the unique aspartate-rich N terminus and the overall similarity to decorin.

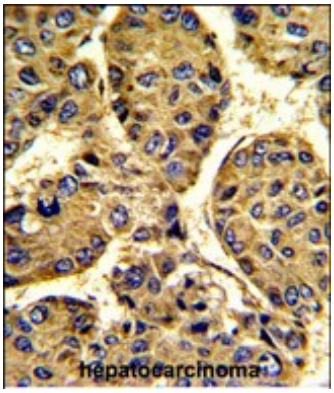
References

Gruber,H.E., Arthritis Res. Ther. 11 (2), R47 (2009)
Ikegawa,S., Curr. Med. Chem. 15 (7), 724-728 (2008)

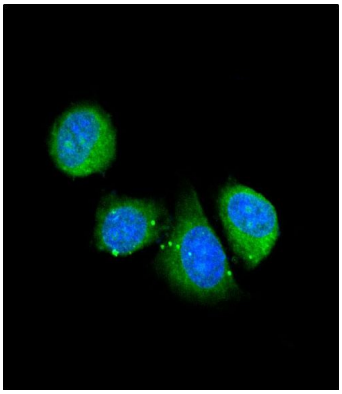
Images



Western blot analysis of ASPN antibody (Center) (Cat. #AP6604c) in HL60 cell line lysates(35ug/lane). ASPN (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human hepatocarcinoma with ASPN Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of ASPN Antibody (Center) (Cat. #AP6604c) with 293 cell followed by Alexa Fluor® 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).