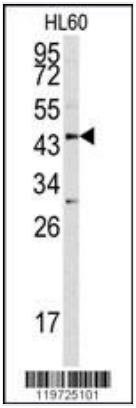
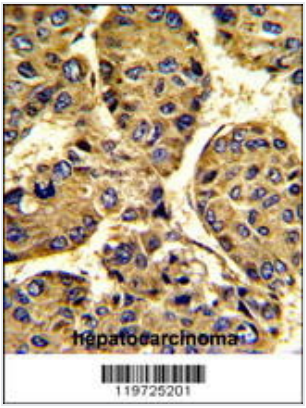
# ASPN Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

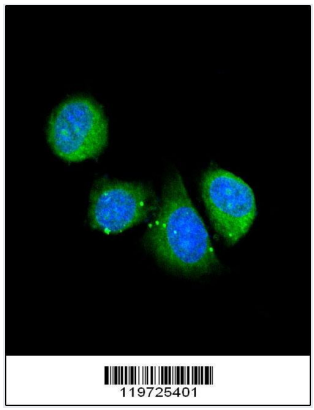
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| **Product Name** | ASPN, Polyclonal Antibody |
| **Full Product Name** | ASPN, ID (Asporin, Periodontal Ligament-associated Protein 1, PLAP-1, SLRR1C, PLAP1, UNQ215/PRO241) (MaxLight 405) |
| **Product Gene Name** | anti-ASPN antibody |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405. |
| **Purity/Purification** | Purified by Ammonium Sulfate Precipitation. |
| **Specificity** | Recognizes human ASPN. |
| **Preparation and Storage** | Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap. |
| **Molecular Weight** | 42kDa |
| **OMIM** | 603932 |
| **3D Structure** | ModBase 3D Structure for Q9BXN1 |
| **Immunogen** | KLH-conjugated synthetic peptide between corresponding to a portion of amino acids within aa247-277 in the center region of human ASPN |
| **Conjugate** | MaxLight405 |
| **Note** | Preservative Free |
| **Product Categories/Family for anti-ASPN antibody** | Antibodies; Extracellular Matrix Proteins |
| **Applications Tested/Suitable for anti-ASPN antibody** | Immunohistochemistry (IHC), FLISA, Western Blot (WB) |
| **Application Notes for anti-ASPN antibody** | IHC: 1:50-1:100<br>FLISA: 1:1,000<br>WB: 1:50-1:100<br>Applications are based on unconjugated antibody. |
| **Related Product Information for anti-ASPN antibody** | MBS6464313 is an antibody targeting ASPN. Also known as ASPN, ID (Asporin, Periodontal Ligament-associated Protein 1, PLAP-1, SLRR1C, PLAP1, UNQ215/PRO241) (MaxLight 405). Reactive in Human. Host: Rabbit. |
| **Product References and Citations for anti-ASPN antibody** | 1. Gruber, H.E., Arthritis Res. Ther. 11(2), R47 (2009). 2. Ikegawa, S., Curr. Med. Chem. 15(7), 724-728 (2008). |
| **Other Notes** | Small volumes of anti-ASPN antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |




**Western Blot (WB) of anti-ASPN antibody**
Western blot analysis of ASPN antibody (Center) in HL60 cell line lysates(35ug/lane). ASPN (arrow) was detected using the purified Pab.




**Immunohistochemistry (IHC) of anti-ASPN antibody**
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.




**Immunofluorescence (IF) of anti-ASPN antibody**
Confocal immunofluorescent analysis of ASPN Antibody (Center) with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ASPN. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 301069322 |
| **NCBI GeneID** | 54829 |
| **NCBI Accession #** | NP_060150 |
| **UniProt Primary Accession #** | Q9BXN1 |
| **UniProt Related Accession #** | Q9BXN1 |
| **GenBank Nucleotide #** | NM_017680 |
| **NCBI Official Full Name** | asporin isoform 1 preproprotein |
| **NCBI Official Synonym Full Names** | asporin |
| **NCBI Official Symbol** | ASPN |
| **NCBI Official Synonym Symbols** | OS3; PLAP1; PLAP-1; SLRR1C |
| **UniProt Protein Name** | Asporin |
| **UniProt Synonym Protein Names** | Periodontal ligament-associated protein 1 |
| **Protein Family** | Asporin |

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| **UniProt Gene Name** | ASPN |
| **UniProt Synonym Gene Names** | PLAP1; SLRR1C; PLAP-1 |
| **UniProt Entry Name** | ASPN_HUMAN |
| **NCBI Protein Information** | asporin |
| **NCBI Summary for ASPN** | This gene encodes a cartilage extracellular protein that is member of the small leucine-rich proteoglycan family. The encoded protein may regulate chondrogenesis by inhibiting transforming growth factor-beta 1-induced gene expression in cartilage. This protein also binds collagen and calcium and may induce collagen mineralization. Polymorphisms in the aspartic acid repeat region of this gene are associated with a susceptibility to osteoarthritis, and also with intervertebral disc disease. Alternative splicing of this gene results in multiple transcript variants.[provided by RefSeq, Jul 2014] |
| **UniProt Comments for ASPN** | ASPN: 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. 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. Genetic variations in ASPN are associated with susceptibility to osteoarthritis type 3 (OS3); also known as osteoarthritis of knee/hip. Osteoarthritis is a degenerative disease of the joints characterized by degradation of the hyaline articular cartilage and remodeling of the subchondral bone with sclerosis. Clinical symptoms include pain and joint stiffness often leading to significant disability and joint replacement. Susceptibility to osteoarthritis is conferred by a triplet repeat expansion polymorphism. ASPN allele having 14 aspartic acid repeats in the N-terminal region of the protein (D14), is overrepresented relative to the common allele having 13 aspartic acid repeats (D13). The frequency of the D14 allele increases with disease severity. The D14 allele is also overrepresented in individuals with hip osteoarthritis. Defects in ASPN are a cause of susceptibility to intervertebral disk disease (IDD). A common musculo- skeletal disorder caused by degeneration of intervertebral disks of the lumbar spine. It results in low-back pain and unilateral leg pain. Susceptibility to intervertebral disk disease, particularly lumbar disk degeneration, is conferred by a triplet repeat expansion polymorphism. ASPN allele having 14 aspartic acid repeats in the N-terminal region of the protein (D14), is associated with the disorder in some populations (PubMed:18304494). Belongs to the small leucine-rich proteoglycan (SLRP) family. SLRP class I subfamily.<br><br>Protein type: Secreted; Extracellular matrix; Secreted, signal peptide<br><br>Chromosomal Location of Human Ortholog: 9q22<br><br>Cellular Component: extracellular matrix; proteinaceous extracellular matrix<br><br>Molecular Function: collagen binding; calcium ion binding<br><br>Biological Process: negative regulation of transforming growth factor beta receptor signaling pathway; bone mineralization<br><br>Disease: Intervertebral Disc Disease; Osteoarthritis Susceptibility 3 |
| **Research Articles on ASPN** | **1.** our study provides evidence that asporin is an important risk factor in intervertebral disc degeneration. The identification of the intrinsic expression mechanisms of asporin provides further understanding of disc degeneration. |
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