

Goat Anti-Asporin / ASPN Antibody
Peptide-affinity purified goat antibody
Catalog # AF1120a

Specification

Goat Anti-Asporin / ASPN Antibody - Product Information

Application	WB
Primary Accession	O9BXN1
Other Accession	NP_060150 , 54829
Reactivity	Human, Mouse
Predicted	Rat
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	43417

Goat Anti-Asporin / ASPN Antibody - Additional Information

Gene ID 54829

Other Names

Asporin, Periodontal ligament-associated protein 1, PLAP-1, ASPN, PLAP1, SLRR1C

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-Asporin / ASPN Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Asporin / ASPN Antibody - 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.

Goat Anti-Asporin / ASPN Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-Asporin / ASPN Antibody - Images



AF1120a (0.5 µg/ml) staining of Human Muscle lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-Asporin / ASPN Antibody - Background

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. Alternate splicing results in multiple transcript variants.

Goat Anti-Asporin / ASPN Antibody - References

Association of an asporin repeat polymorphism with ankylosing spondylitis in Han Chinese population: a case-control study. Liu D, et al. Clin Invest Med, 2010 Feb 1. PMID 20144272.
Asporin and transforming growth factor-beta gene expression in osteoblasts from subchondral bone and osteophytes in osteoarthritis. Sakao K, et al. J Orthop Sci, 2009 Nov. PMID 19997821.
Asporin competes with decorin for collagen binding, binds calcium and promotes osteoblast collagen mineralization. Kalamajski S, et al. Biochem J, 2009 Sep 14. PMID 19589127.
Asporin, a susceptibility gene in osteoarthritis, is expressed at higher levels in the more degenerate human intervertebral disc. Gruber HE, et al. Arthritis Res Ther, 2009. PMID 19327154.
Association of the CALM1 core promoter polymorphism with knee osteoarthritis in patients of Greek origin. Poulou M, et al. Genet Test, 2008 Jun. PMID 18452398.