

Product datasheet

Anti-Asporin antibody ab31303

★★★★☆ 3 Abreviews 3 References 4 图像

概述

产品名称	Anti-Asporin抗体
描述	山羊多克隆抗体to Asporin
经测试应用	适用于: WB, IHC-P, ICC/IF, ELISA
种属反应性	与反应: Mouse, Human 预测可用于: Rat
免疫原	Synthetic peptide: C-IHENKVKKIQKDT , corresponding to Internal sequence amino acids 182-194 of Human Asporin. (Peptide available as ab134013 .) Run BLAST with Run BLAST with
阳性对照	Human bone marrow lysate.

性能

形式	Liquid
存放说明	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
存储溶液	Preservative: 0.02% Sodium Azide Constituents: 0.5% BSA, Tris buffered saline, pH 7.3
纯度	Immunogen affinity purified
纯化说明	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide
克隆	多克隆
同种型	IgG

应用

Our [Abpromise guarantee](#) covers the use of **ab31303** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
WB	★★★★☆	Use a concentration of 1 - 3 µg/ml. Detects a band of approximately 40 kDa (predicted molecular weight: 43 kDa). Can be blocked with Human Asporin peptide (ab134013) .
IHC-P		Use at an assay dependent dilution. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. PubMed: 20541802
ICC/IF		Use at an assay dependent dilution.
ELISA	★★★★★	Use at an assay dependent concentration.

靶标

功能	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.
组织特异性	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. Co-localizes with TGFB1 in chondrocytes within osteoarthritic (OA) lesions of articular cartilage.
疾病相关	Genetic variations in ASPN are associated with susceptibility to osteoarthritis type 3 (OS3) [MIM:607850]; 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. Note=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) [MIM:603932]. 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. Note=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).
序列相似性	Belongs to the small leucine-rich proteoglycan (SLRP) family. SLRP class I subfamily. Contains 11 LRR (leucine-rich) repeats. Contains 1 LRRNT domain.
结构域	The LRR 5 repeat can inhibit BMP2-induced cytodifferentiation and may be involved in the interaction with BMP2 (By similarity). The repeats LRR 10, LRR 11 and LRR 12 are involved in binding type I collagen. The poly-Asp region is involved in binding calcium.
翻译后修饰	There is no serine/glycine dipeptide sequence expected for the attachment of O-linked

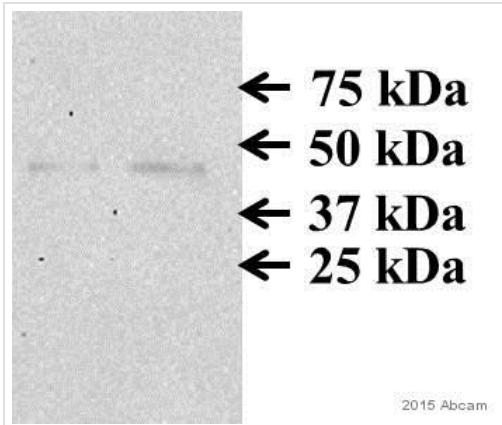
glycosaminoglycans and this is probably not a proteoglycan. The O-linked polysaccharide on 54-Ser is probably the mucin type linked to GalNAc.

The N-linked glycan at Asn-282 is composed of variable structures of GlcNAc, mannose, fucose, HexNAc and hexose.

细胞定位

Secreted > extracellular space > extracellular matrix.

图片



Western blot - Anti-Asporin antibody (ab31303)

This image is courtesy of an anonymous Abreview

All lanes : Anti-Asporin antibody (ab31303)
at 1/1000 dilution

Lane 1 : Human osteosarcoma cell line whole
lysate

Lane 2 : Human osteosarcoma cell line whole
lysate

Lysates/proteins at 30 µg per lane.

Secondary

HRP-conjugated anti-goat IgG polyclonal at
1/2000 dilution

Developed using the ECL technique

Performed under reducing conditions.

Predicted band size : 43 kDa

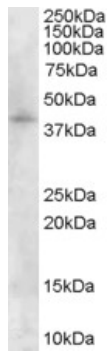
Observed band size : 42 kDa

Exposure time : 1 minute

*This image is courtesy of an anonymous
Abreview*

Blocked with 5% milk for 1 hour at 27°C.

Incubated with the primary antibody diluted in
blocking buffer for 12 hours at 4°C.



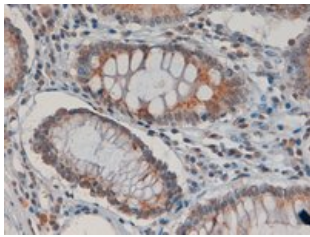
Western blot - Asporin antibody (ab31303)

Anti-Asporin antibody (ab31303) at 0.3 µg/ml
+ Human Bone Marrow lysate (35µg protein in RIPA buffer)

Predicted band size : 43 kDa

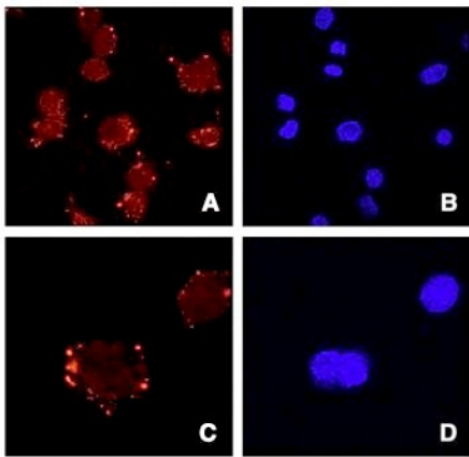
Observed band size : 40 kDa

Primary incubation was 1 hour. Detected by chemiluminescence.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Asporin antibody (ab31303)

ab31303 (4µg/ml) staining of paraffin embedded Human Colon. Steamed antigen retrieval with citrate buffer pH 6, HRP-staining. Shows textured staining in the cytoplasm of absorptive cells.



Immunocytochemistry/ Immunofluorescence - Asporin antibody (ab31303)

Ab31303 staining of ATDC5 cells (Panels A and C) and DAPI (panels B and D). Image shows staining of cytoplasm and on the cell surface. Data gratefully received from Dr. Shiro Ikegawa, SNP Research Center, RIKEN, Japan.

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