

CSPG4 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1802a

Specification

CSPG4 Antibody - Product Information

Application	E, WB, FC
Primary Accession	O6UVK1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	250.0kDa KDa

Description

A human melanoma-associated chondroitin sulfate proteoglycan plays a role in stabilizing cell-substratum interactions during early events of melanoma cell spreading on endothelial basement membranes. CSPG4 represents an integral membrane chondroitin sulfate proteoglycan expressed by human malignant melanoma cells.

Immunogen

Purified recombinant fragment of human CSPG4 (AA: 2247-2308) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

CSPG4 Antibody - Additional Information

Gene ID 1464

Other Names

Chondroitin sulfate proteoglycan 4, Chondroitin sulfate proteoglycan NG2, Melanoma chondroitin sulfate proteoglycan, Melanoma-associated chondroitin sulfate proteoglycan, CSPG4, MCSP

Dilution

E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400

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

CSPG4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CSPG4 Antibody - Protein Information

Name CSPG4

Synonyms MCSP

Function

Proteoglycan playing a role in cell proliferation and migration which stimulates endothelial cells motility during microvascular morphogenesis. May also inhibit neurite outgrowth and growth cone collapse during axon regeneration. Cell surface receptor for collagen alpha 2(VI) which may confer cells ability to migrate on that substrate. Binds through its extracellular N-terminus growth factors, extracellular matrix proteases modulating their activity. May regulate MMP16-dependent degradation and invasion of type I collagen participating in melanoma cells invasion properties. May modulate the plasminogen system by enhancing plasminogen activation and inhibiting angiostatin. Functions also as a signal transducing protein by binding through its cytoplasmic C-terminus scaffolding and signaling proteins. May promote retraction fiber formation and cell polarization through Rho GTPase activation. May stimulate alpha-4, beta-1 integrin-mediated adhesion and spreading by recruiting and activating a signaling cascade through CDC42, ACK1 and BCAR1. May activate FAK and ERK1/ERK2 signaling cascades.

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:Q00657}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q00657}; Extracellular side {ECO:0000250|UniProtKB:Q00657}. Apical cell membrane {ECO:0000250|UniProtKB:Q00657}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q00657}; Extracellular side {ECO:0000250|UniProtKB:Q00657}. Cell projection, lamellipodium membrane {ECO:0000250|UniProtKB:Q00657}; Single-pass type I membrane protein {ECO:0000250|UniProtKB:Q00657}; Extracellular side {ECO:0000250|UniProtKB:Q00657}. Cell surface {ECO:0000250|UniProtKB:Q00657}.

Note=Localized at the apical plasma membrane it relocalizes to the lamellipodia of astrocytoma upon phosphorylation by PRKCA. Localizes to the retraction fibers. Localizes to the plasma membrane of oligodendrocytes (By similarity) {ECO:0000250|UniProtKB:Q00657, ECO:0000250|UniProtKB:Q8VHY0}

Tissue Location

Detected in fibroblasts (at protein level) (PubMed:36213313). Detected in placenta (at protein level) (PubMed:32337544). Detected in malignant melanoma cells

CSPG4 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](#)

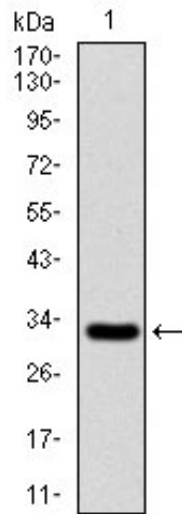
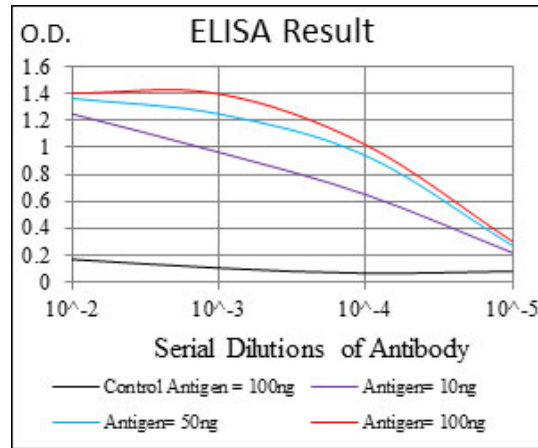


Figure 1: Western blot analysis using CSPG4 mAb against human CSPG4 recombinant protein. (Expected MW is 32.5 kDa)

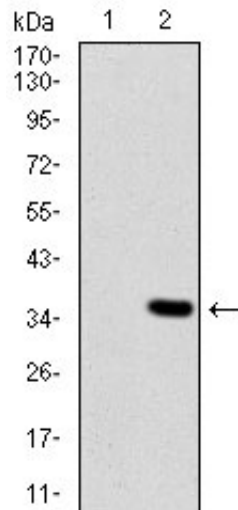


Figure 2: Western blot analysis using CSPG4 mAb against HEK293 (1) and CSPG4 (AA: 2247-2308)-hlgGfc transfected HEK293 (2) cell lysate.

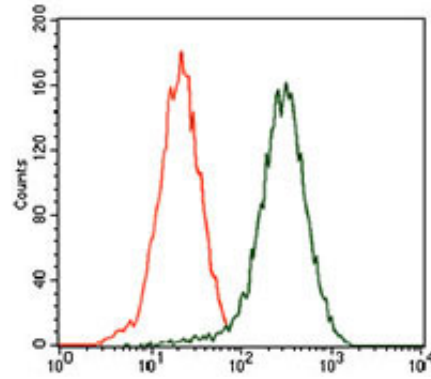


Figure 3: Flow cytometric analysis of HEK293 cells using CSPG4 mouse mAb (green) and negative control (red).

CSPG4 Antibody - Background

This gene belongs to the RING finger family, members of which encode proteins characterized by a RING domain, a zinc-binding motif related to the zinc finger domain. The gene product can bind DNA and can act as a transcriptional repressor. It is associated with the multimeric polycomb group protein complex. The gene product interacts with the polycomb group proteins BMI1, EDR1, and CBX4, and colocalizes with these proteins in large nuclear domains. It interacts with the CBX4 protein via its glycine-rich C-terminal domain. The gene maps to the HLA class II region, where it is contiguous with the RING finger genes FABGL and HKE4.

CSPG4 Antibody - References

1. Cancer Res. 2011 Dec 15;71(24):7410-22.
2. Pigment Cell Melanoma Res. 2011 Dec;24(6):1148-57.