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

CSPG4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1802a

Product Information

Application	WB, FC, E
Primary Accession	Q6UVK1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	7G4E5
Isotype	IgG1
Calculated MW	250537
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

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

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 MPP16-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. Also functions 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

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.

References

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

Images

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

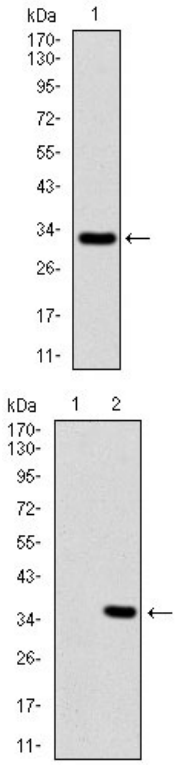

Figure 2: Western blot analysis using CSPG4 mAb against HEK293 (1) and CSPG4 (AA: 2247-2308)-hIgGFc transfected HEK293 (2) cell lysate.

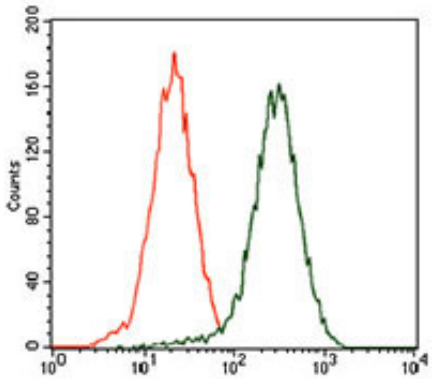

Figure 3: Flow cytometric analysis of HEK293 cells using CSPG4 mouse mAb (green) and negative control (red).