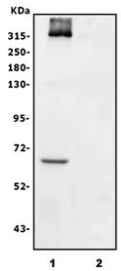
CSPG4 Antibody / Melanoma-Associated Proteoglycan Antibody (RQ6252)

Catalog No.	Formulation	Size
RQ6252	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q6UVK1
Applications	Western Blot : 1-2ug/ml Direct ELISA : 0.1-0.5ug/ml
Limitations	This CSPG4 Antibody / Melanoma-Associated Proteoglycan Antibody is available for research use only.



CSPG4 Antibody A375 WB. Western blot analysis of human A375 melanoma and MCF7 breast carcinoma cell lysates using CSPG4 antibody demonstrates a strong broad high molecular weight band in A375 cells migrating above 250 kDa, consistent with heavily glycosylated CSPG4 / NG2 proteoglycan. An additional lower molecular weight band near 60-70 kDa may represent a processed or partially glycosylated CSPG4-associated species. Minimal signal is observed in MCF7 cells, supporting the melanoma-associated expression profile of MCSP / CSPG4.

Description

Chondroitin sulfate proteoglycan 4 (CSPG4), also known as NG2 and melanoma-associated chondroitin sulfate proteoglycan (MCSP), is a large transmembrane proteoglycan involved in extracellular matrix interaction, cellular migration, tumor progression, and signaling pathway regulation. CSPG4 Antibody / Melanoma-Associated Proteoglycan Antibody recognizes a heavily glycosylated cell-associated proteoglycan that contributes to tumor-associated signaling networks and microenvironmental communication pathways.

CSPG4 antibody, also referred to as NG2 antibody and MCSP antibody in the literature, is widely used in melanoma biology, tumor microenvironment, vascular signaling, and cancer progression research applications. CSPG4 has become particularly well known as a melanoma-associated marker because of its elevated expression in melanoma cells and aggressive tumor-associated cellular populations.

CSPG4 is primarily localized to the plasma membrane where it interacts with extracellular matrix proteins, receptor tyrosine kinase-associated signaling complexes, and cytoskeletal regulatory pathways. The protein contributes to processes involving proliferation, migration, adhesion dynamics, angiogenesis-associated signaling, and extracellular remodeling. Extensive glycosylation and chondroitin sulfate modification contribute to the large apparent molecular weight and variable migration patterns frequently observed during western blot analysis.

Elevated CSPG4 expression has been reported in melanoma, glioblastoma, triple negative breast cancer, sarcoma, and additional aggressive tumor types. NG2/CSPG4 expression has additionally been associated with pericytes, progenitor-associated cellular populations, and activated stromal compartments involved in tumor-associated vascular biology and microenvironment regulation. Because of its broad role in tumor progression-associated signaling pathways, CSPG4 continues to attract interest as a marker of invasive and therapy-adaptive cellular phenotypes.

Western blot analysis with CSPG4 antibodies commonly identifies a broad high molecular weight band corresponding to the extensively glycosylated mature proteoglycan, often migrating above the predicted molecular weight of approximately 251 kDa. Additional lower molecular weight bands may reflect proteolytic processing products, partial glycosylation states, or alternatively processed CSPG4-associated species depending on the cellular context examined.

Detection of strong CSPG4-associated signal in A375 melanoma-derived cells aligns with the established expression profile of NG2/MCSP in melanoma biology and supports the continued use of CSPG4 antibodies in studies examining tumor progression, extracellular matrix interaction, and tumor-associated signaling pathways. Minimal or absent signal in MCF7 breast carcinoma cells further supports the differential expression profile of this melanoma-associated proteoglycan.

Together, the available western blot data support the use of CSPG4 antibody for investigating NG2/MCSP-associated signaling pathways, melanoma biology, and tumor microenvironment-associated proteoglycan regulation.

For additional NG2 and MCSP research antibodies targeting melanoma-associated proteoglycan signaling and tumor microenvironment pathways, explore the broader NG2 Antibody page featuring clone LHM 2.

Application Notes

Optimal dilution of the CSPG4 Antibody / Melanoma-Associated Proteoglycan Antibody should be determined by the researcher.

Immunogen

A human recombinant partial protein (amino acids N962-D1194) was used as the immunogen for the CSPG4 antibody.

Storage

After reconstitution, the CSPG4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CSPG4 antibody, NG2 antibody, MCSP antibody, melanoma-associated chondroitin sulfate proteoglycan antibody, chondroitin sulfate proteoglycan 4 antibody

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