

# NG2 Rabbit pAb

Catalog # AP96787

## Product Information

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| <b>Application</b>                      | WB, IHC-P, IHC-F, IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Primary Accession</b>                | <a href="#">Q6UVK1</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Other Accession</b>                  | <a href="#">Q6UVK1</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Reactivity</b>                       | Human, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Predicted</b>                        | Rat, Pig, Horse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Host</b>                             | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Clonality</b>                        | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Calculated MW</b>                    | 250537                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Physical State</b>                   | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Immunogen</b>                        | KLH conjugated synthetic peptide derived from human NG2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Epitope Specificity</b>              | 701-800/2322                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Isotype</b>                          | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Purity</b>                           | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Buffer</b>                           | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SIMILARITY</b>                       | Contains 15 CSPG (NG2) repeats. Contains 2 laminin G-like domains.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SUBUNIT</b>                          | Interacts with the first PDZ domain of MPDZ. Interacts with PRKCA. Binds TNC, laminin-1, COL5A1 and COL6A2. Interacts with PLG and angiostatin. Binds FGF2 and PDGFA. Interacts with GRIP1, GRIP2 and GRIA2. Forms a ternary complex with GRIP1 and GRIA2 (By similarity). Interacts with LGALS3 and the integrin composed of ITGB1 and ITGA3. Interacts with ITGA4 through its chondroitin sulfate glycosaminoglycan. Interacts with BCAR1, CDC42 and ACK1. Interacts with MMP16.                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Post-translational modifications</b> | O-glycosylated; contains glycosaminoglycan chondroitin sulfate which are required for proper localization and function in stress fiber formation (By similarity). Involved in interaction with MMP16 and ITGA4. Phosphorylation by PRKCA regulates its subcellular location and function in cell motility (By similarity).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Important Note</b>                   | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Background Descriptions</b>          | Proteoglycans (PGs) are a family of proteins composed of different polypeptide chains containing glycosaminoglycan (GAG) modifications. They vary in their cellular locations and have diverse structure and functions. NG2 is a proteoglycan found in the nervous system, comprising a large integral membrane PG with a core protein of 300 kDa and at least one covalently attached chondroitin sulfate (CS) GAG chain. In the CNS this protein is expressed mainly on the surfaces of developing and adult oligodendrocyte precursor cells, but is also associated with developing chondrocytes, cardiomyocytes, pericytes and several human tumours. NG2 also stimulates 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. |

## Additional Information

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| Gene ID     | 1464                                                                                                                                                                                                                                                                                                                                                                     |
| Other Names | CSPG4A; HMW-MAA; MCSP; MCSPG; MEL-CSPG; MSK16; NG2; 4732461B14Rik; AN2; CSPG4_HUMAN; CSPG4; Chondroitin sulfate proteoglycan NG2; Melanoma chondroitin sulfate proteoglycan; Melanoma-associated chondroitin sulfate proteoglycan; CSPG4_MOUSE; Proteoglycan AN2; Kiaa4232; chondroitin sulfate proteoglycan 4; chondroitin sulfate proteoglycan 4 (melanoma-associated) |
| Dilution    | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500                                                                                                                                                                                                                                                                                                               |
| Storage     | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.                                                                                                                                                                          |

## Protein Information

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| 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 relocates 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.