

NG2/CSPG4 Antibody

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 250	Source/Isotype: Rabbit	UniProt ID: #Q6UVK1	Entrez-Gene Id: 1464
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

NG2/CSPG4 Antibody recognizes endogenous levels of total NG2/CSPG4 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp1410 of human NG2/CSPG4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The chondroitin sulfate proteoglycan NG2 is a type I membrane protein expressed by subpopulations of glia including oligodendroglial precursor cells and a variety of tumor cells. Normal precursor cells and malignant tumor cells migrate and proliferate, but there is evidence that cells may not be able to engage in both activities at the same time. However, NG2 is involved in promoting both proliferation and motility (1). The extracellular domain of NG2 sequesters growth factors and binds to both growth factor receptors and extracellular matrix ligands such as fibronectin, collagens and laminin. The cytoplasmic domain is involved in activating Rac, Cdc42, and p130 Cas (2). PKCα phosphorylates NG2 at Thr2256, triggering the redistribution of NG2 from apical microprocesses to lamellipodia accompanied by enhanced cell motility (3). ERK phosphorylates NG2 at Thr2314, stimulating cell proliferation (4).

Background References

1. Karram, K. et al. (2005) *J Anat* 207, 735-44.
2. Eisenmann, K.M. et al. (1999) *Nat Cell Biol* 1, 507-13.
3. Makagiansar, I.T. et al. (2004) *J Biol Chem* 279, 55262-70.
4. Makagiansar, I.T. et al. (2007) *J Cell Biol* 178, 155-65.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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