

NG2 Antibody

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H R	Endogenous	250	Rabbit	#Q6UVK1	1464

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

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 Antibody detects endogenous levels of total NG2 protein.

Species predicted to react based on 100% sequence homology

Mouse

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding His2260 of human NG2. Antibodies are purified by 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. Karam, K. et al. (2005) *J Anat* 207, 735-44.
2. Eisenmann, K.M. et al. (1999) *Nat Cell Biol* 1, 507-13.
3. Makgiansar, I.T. et al. (2004) *J Biol Chem* 279, 55262-70.
4. Makgiansar, 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

Cross-Reactivity Key

H: Human **R:** Rat

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