



Qty: 100 µg/200 µL

Mouse anti-NG2

Catalog No. 37-2300

Lot No.

## Mouse anti-NG2

### FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

**CLONE:** N143.8

**ISOTYPE:** Mouse IgG<sub>1</sub>-kappa

### IMMUNOGEN

Purified rat NG2 protein.

### SPECIFICITY

This antibody reacts with a membrane proximal epitope of the human and rat NG2 proteins. The molecular weight of NG2 is ~300 kDa.

### REACTIVITY

Reactivity has been confirmed with rat B49 glial cell line.

Sample	Immuno-precipitation (native)	Immuno-Fluorescence*	IHC (frozen)	IHC (FFPE)	Western Blotting**	ELISA
Human	ND	ND	ND	0	0	++
Rat	++	+	++	0	0	++
Mouse	ND	ND	ND	ND	ND	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

\*For immunofluorescence applications, cat. no. 37-2600, cat. no. 37-2500 or cat. no. 37-2700 is recommended.

\*\*For Western blotting, cat. no. 37-2400 or cat. no. 37-2700 are recommended.

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Immunoprecipitation:** 10 µg/IP reaction

**Immunofluorescence:** 1-5 µg/mL

**ELISA:** 0.1-1 µg/mL

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI372300

(Rev 10/08) DCC-08-1089

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**BACKGROUND**

The NG2 chondroitin sulfate proteoglycan is a valuable marker for many types of immature progenitor cells including pericytes/smooth muscle cells, chondroblasts and oligodendrocyte progenitors<sup>1</sup>. NG2 is often expressed in melanomas, chondrosarcomas, glioblastomas and myeloid leukemias<sup>2</sup>. Studies indicate that NG2 is involved in modulating cellular response to growth factors<sup>3-5</sup> and cell motility<sup>6-7</sup>; these are critical functions in proliferation and migration of immature progenitor cells and tumor cells.

Oligodendrocyte precursor cells (OPCs) are a population of NG2 expressing cells in the brain that accumulate in response to CNS injuries<sup>8</sup>. OPCs, together with microglia and astrocytes, form the glial scar, which is believed to inhibit or prevent axonal regeneration partly by producing growth inhibiting NG2 at the injury site<sup>8</sup>. It has been suggested that inhibiting NG2 at sites of spinal cord injury may increase beneficial axonal regeneration<sup>8-9</sup>.

Studies suggest that NG2 stimulates tumor growth and neovascularization in glioblastoma multiforme by inhibiting angiostatin and thus promoting angiogenesis<sup>10</sup>. As NG2 is associated with increased tumor cell proliferation, it may be a potential therapeutic marker in brain tumors<sup>11</sup>.

**REFERENCES**

1. Stallcup WB, et al. *J Neurocytol* 31(6-7):423-35, 2002.
2. Stallcup WB, et al. *J Cell Sci* 114:2315-2325, 2001.
3. Grako KA and Stallcup WB. *Exp Cell Res* 221(1):231-40, 1995.
4. Grako KAJ, et al. *Cell Sci* 112(6):905-15, 1999.
5. Goretzki L, et al. *J Biol Chem* 274(24):16831-7, 1999.
6. Burg MA, et al. *Exp Cell Res* 235(1):254-64, 1997.
7. Fang X, et al. *Mol Biol Cell* (10):3373-87, 1999.
8. Chen ZJ, et al. *J Neurocytol* 31(6-7):481-95, 2002.
9. Jones LL, et al. *J Neurosci* 22(7):2792-2803, 2002.
10. Chekenya M, et al. *FASEB J* 16:586-588, 2002.
11. Chekenya M, et al. *J Neurocytol* (6-7):507-21, 2002.

**RELATED PRODUCTS**

<b>Product</b>	<b>Clone/PAD*</b>	<b>Cat. No.</b>
Mouse anti-NG2 Cocktail	D120.43/D4.11/N143.8/N109.6	37-2700
Mouse anti-NG2 (N-Term)	N109.6	37-2400
Mouse anti-NG2 (Mid)	D120.43	37-2600
Mouse anti-NG (N-Term)	D4.11	37-2500
Mouse anti-EGFr	31G7	28-0003
Mouse anti-EGFr vIII	G100	13-7330
Spot-Light® EGFr DNA Amplification Probe		84-1300
Mouse anti-PD-ECGF	PGF-44C	18-7331
Rabbit anti-OSP/Claudin-11	ZMD.305	35-4500

Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

\*PAD: Polyclonal Antibody Designation

<b>Conjugate</b>	<b>ZyMAX™ Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX™ Goat x Mouse IgG (H+L)</b>
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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