



Rabbit Anti-NG2 antibody

SL5829R

Product Name:	NG2
Chinese Name:	黑色素瘤硫酸软骨素蛋白多糖抗体
Alias:	MELCSPG; AN2; AN2 proteoglycan; Chondroitin sulfate proteoglycan 4 (melanoma-associated); Chondroitin sulfate proteoglycan 4; CSPG4; Cspg4 chondroitin sulfate proteoglycan 4; HMW-MAA; HSN tumor-specific antigen; MCSP; MCSPG; MEL-CSPG; Melanoma chondroitin sulfate proteoglycan; Melanoma-associated chondroitin sulfate proteoglycan; MSK16; CSPG4 HUMAN.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,Horse,Rabbit,Guinea Pig,
Applications:	ELISA=1:500-1000IHC-P=1:400-800 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	248kDa
Cellular localization:	cytoplasmicThe cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human MCSPG:2211-2322/2322<Cytoplasmic>
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	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.

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 MMP16-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. Functions also 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.

Subunit:

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.

Subcellular Location:

Apical cell membrane. Cell projection > lamellipodium membrane. Localized at the apical plasma membrane it relocalizes to the lamellipodia of astrocytoma upon phosphorylation by PRKCA. Localizes to the retraction fibers. Localizes to the plasma membrane of oligodendrocytes.

Tissue Specificity:

Detected only in malignant melanoma cells.

Post-translational modifications:

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).

Similarity:

Contains 15 CSPG (NG2) repeats.
Contains 2 laminin G-like domains.

SWISS:

Q6UVK1

Gene ID:

1464

Database links:

[Entrez Gene: 1464](#) Human

[Entrez Gene: 121021](#) Mouse

[Omim: 601172](#) Human

[SwissProt: Q6UVK1](#) Human

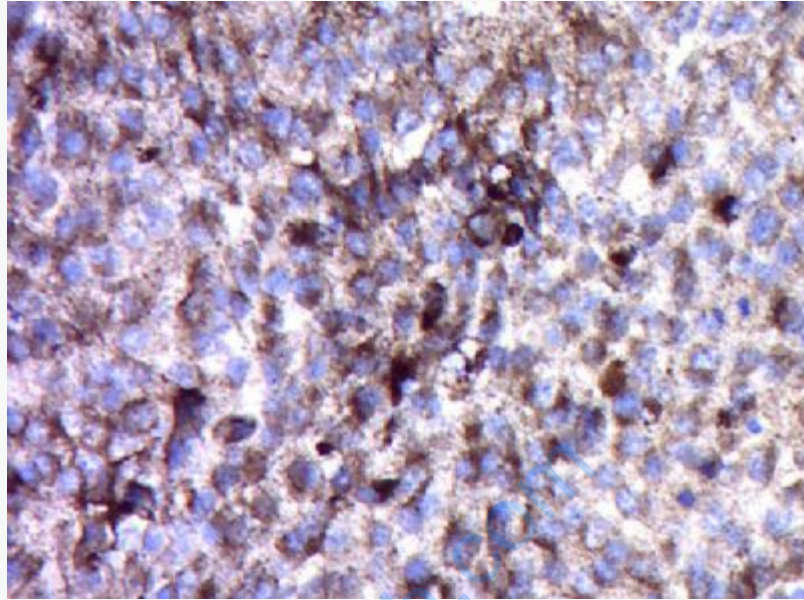
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[Unigene: 513044](#) Human

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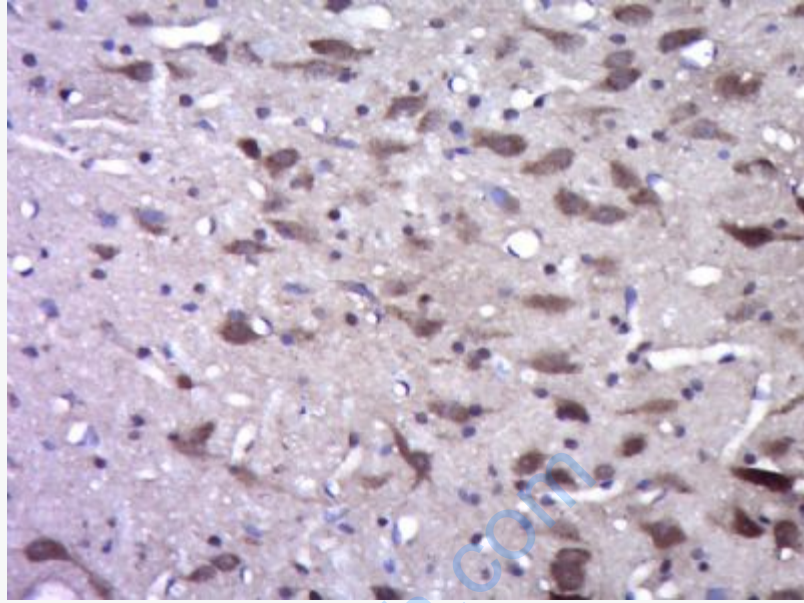
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

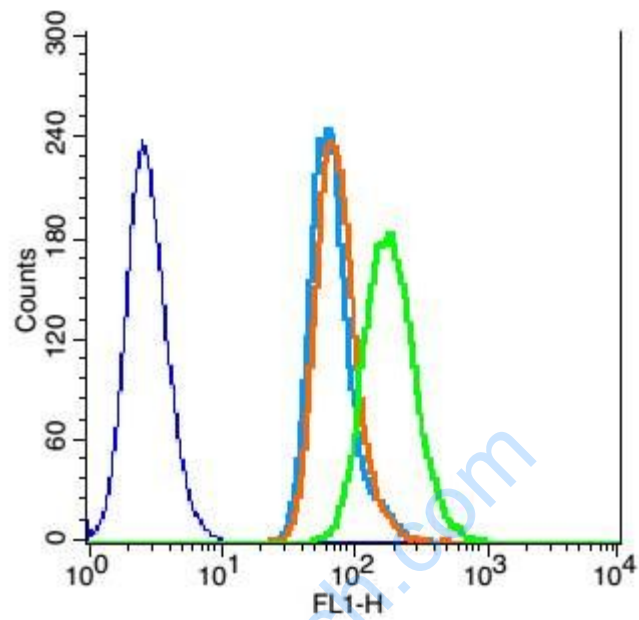


Picture:

Paraformaldehyde-fixed, paraffin embedded (Human melanoma); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (NG2) Polyclonal Antibody, Unconjugated (SL5829R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (NG2) Polyclonal Antibody, Unconjugated (SL5829R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Blank control: U937 (blue)

Isotype Control Antibody: Rabbit IgG(orange) ; Secondary Antibody: Goat anti-rabbit IgG-FITC(white blue), Dilution: 1:100 in 1 X PBS containing 0.5% BSA ;

Primary Antibody Dilution: 5 μ l in 100 μ l 1X PBS containing 0.5% BSA(green).