Product datasheet

Anti-NG2 antibody [LHM 2] ab20156

Overview

Product name: Anti-NG2 antibody [LHM 2]
Description: Mouse monoclonal [LHM 2] to NG2
Host species: Mouse
Tested applications: Suitable for: IHC-FoFr, WB, IP, IHC-Fr, Flow Cyt
Species reactivity: Reacts with: Human
Immunogen: Tissue/ cell preparation (Human - a 375P cell crude extract).
General notes: The LHM2 antibody is a very good marker for melanoma (>90% stained). LHM2 also stains basal cell carcinomas and subpopulation of basal keratinocytes. LHM2 can be used as a diagnostic panel for immunopathology of malignant melanoma and potential candidates for immunomaging and immunotherapy of disseminated melanoma. The originators of this antibody report that the MCSP is a cell surface marker specific for epidermal stem cells (J. Invest. Dermatol. in press). Potential applications of the LHM2 antibody include use for separation/isolation of epidermal stem cells, detection of stem cells in skin biopsies or epithelial cell cultures and optimisation of culture conditions to retain epidermal stem cell population in in vitro cultures.

Properties

Form: Liquid
Storage instructions: Shipped at +4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer: Constituent: PBS
Purity: Protein A/G purified
Clonality: Monoclonal
Clone number: LHM 2
Myeloma: NS0
Isotype: IgG1
Light chain type: kappa

Applications
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. 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.

Tissue specificity
Detected only in malignant melanoma cells.

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

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.

Cellular localization
Apical cell membrane. Cell projection > lamellipodium membrane. 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.

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