Human Protocadherin γ C3 Antibody

Monoclonal Mouse IgG_1 Clone # 926525

Catalog Number: MAB8364

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Protocadherin γ C3 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 926525
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Protocadherin γ C3 Met1-Tyr693 Accession # Q9UN70
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

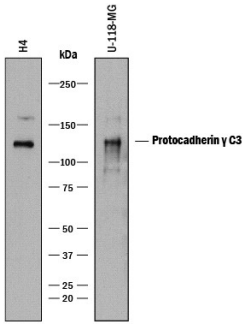
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below

DATA

Western Blot



Detection of Human Protocadherin γ C3 by Western Blot. Western blot shows lysates of H4 human neuroglioma cell line and U-118-MG human glioblastoma/astrocytoma cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Protocadherin γ C3 Monoclonal Antibody (Catalog # MAB8364) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Protocadherin γ C3 at approximately 120 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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BACKGROUND

Protocadherin γ C3 is a member of the γ subgroup of clustered protocadherins (1). Like other γ protocadherins, mature Protocadherin γ C3 contains six extracellular cadherin domains, a transmembrane region, and a cytoplasmic domain (2, 3). Within the ECD, human Protocadherin γ C3 shares 91% and 92% amino acid sequence identity with mouse and rat Protocadherin γ C3, respectively. It plays an important role in cell adhesion and cell recognition through CA^{2+} -dependent homophilic interaction (4). MMP-mediated shedding of γ protocadherins and release of their cytoplasmic domain by the γ-secretase complex results in translocation of the intracellular domain into the nucleus and transcriptional activation of target genes (5-7). Protocadherin γ C3 is cleaved within its ectodomain by ADAM10 in fibroblasts and neuronal cells (8). Deletion of the entire protocadherin γ gene cluster is embryonic lethal in mice (9). Protocadherin γ C3 is most notably expressed in the nervous system (10). Conditional deletion of the protocadherin γ gene cluster in mice affects development of retinal ganglion cells and spinal cord interneurons, resulting in decreased synapses and increased neuronal apoptosis (9, 11-14). The C-type protocadherin γ isoforms specifically may be responsible for the increased apoptosis observed in mice lacking the entire protocadherin γ gene cluster (15). Cortical neuron-specific deletion of the protocadherin γ gene cluster results in dendritic arborization defects (16). The protocadherin γ subfamily may also be involved in cerebrospinal fluid production and the maturation and differentiation of postnatally born olfactory granule cells (17, 18).

References:

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