Human Protocadherin γ C3
Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 926518

Catalog Number: FAB83641R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Protocadherin γ C3 in direct ELISAs. Stains human Protocadherin γ C3 transfectants but not irrelevant transfectants in flow cytometry.
Source	Monoclonal Mouse IgG_1 Clone # 926518
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
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

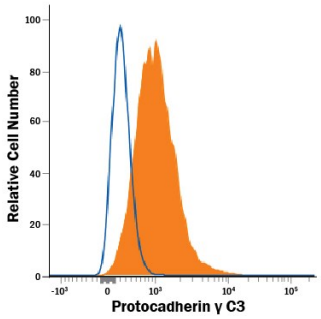
APPLICATIONS

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
Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of Protocadherin γ C3 in HEK293 Human Cell Line Transfected with Human Protocadherin γ C3 by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with human Protocadherin ? C3 was stained with Mouse Anti-Human Protocadherin ? C3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # FAB83641R, filled histogram) or isotype control antibody (Catalog # Catalog # IC002R, open histogram). View our protocol for Staining Membrane-associated Proteins.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

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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 generated olfactory granule cells (17, 18).

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