

DESCRIPTION

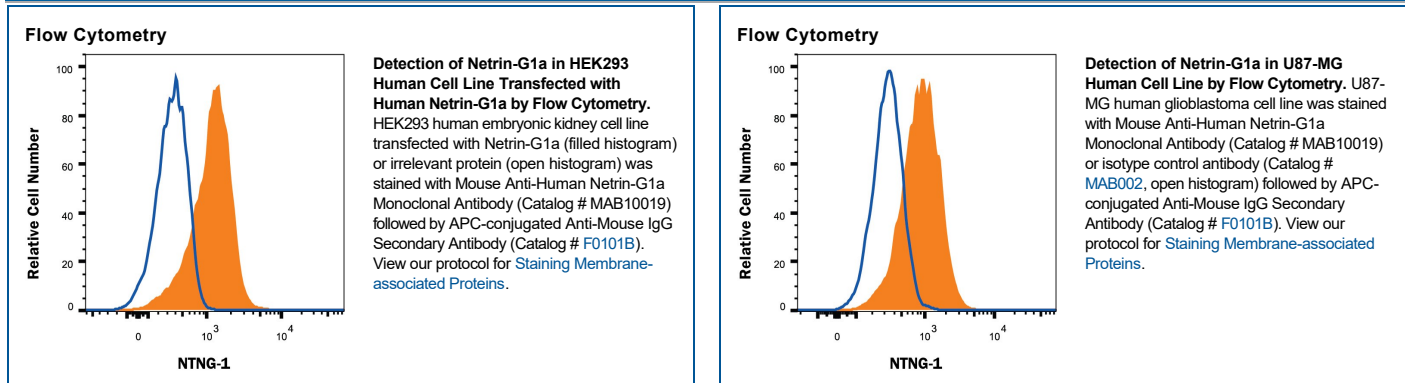
Species Reactivity	Human
Specificity	Detects human Netrin-G1a in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 1010035
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human embryonic kidney cell, HEK293-derived human Netrin-G1a His29-Gly503 Accession # Q9Y212
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
Flow Cytometry	0.25 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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. <ul style="list-style-type: none"> • 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.

BACKGROUND

NTNG-1, known as Netrin-G1 or alternatively Laminin-1 (Gene name: NTNG1), is a member of the UNC-6/Netrin family of proteins. Human Netrin-G1 is a 55 kDa protein and shares 100% homology with its crab-eating macaque, 98% homology with its rat homolog, and 97% homology with its mouse homolog. Netrin-G1 is synthesized as a 539 amino acid (aa) precursor with a 28 aa signal sequence, a 251 aa laminin-related region containing an N-terminal laminin globular domain (domain VI) followed by 3 laminin EGF-like repeats, a GPI (glycosylphosphatidylinositol) anchor (Ser510), and a C-terminal 28 aa propeptide that is removed in mature Netrin-G1 (1, 3, 4). Netrin-G1 interacts with its ligand, Netrin-G ligand 1 (NGL1) to regulate neuron growth and patterning, axonal subdendritic differentiation, and synapse formation throughout development (1, 2, 4, 6). Abnormal expression of Netrin-G1 via SNPs (single nucleotide polymorphisms) have been implicated in pathogenesis for schizophrenia (5). Netrin-G1 has widespread expression only in vertebrates, occurring in olfactory mitral cells, cells of the inferior colliculus (hearing), dorsal thalamus (behavior), and cells of the deep cerebellar nuclei and inferior olive (motion) (3).

References:

1. Seiradake, E. *et al.* (2011) EMBO J. **30**:4479.
2. Song, Y. *et al.* (2013) J Cell Sci. **126**:4926.
3. Nakashiba, T. *et al.* (2000) J Neuroscience. **20**:6540.
4. Matsukawa, H. *et al.* (2014) J Neuroscience. **34**:15779.
5. Zhu, Y. *et al.* (2011) J Genet. **90**:499.
6. Nishimura-Akiyoshi, S. *et al.* (2007) Neuroscience. **104**:14801.

