

DESCRIPTION

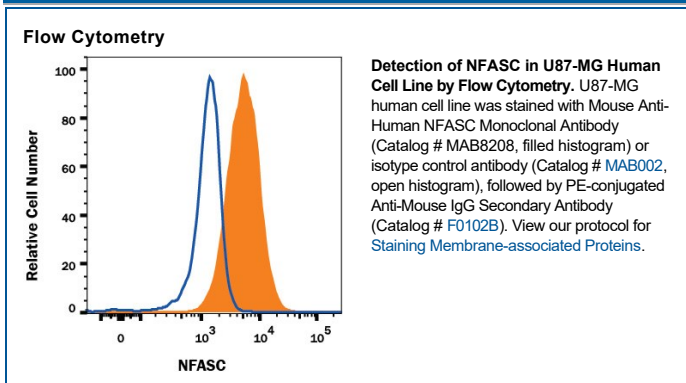
| | |
|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human Neurofascin in direct ELISAs. |
| Source | Monoclonal Mouse IgG ₁ Clone # 1018843 |
| Purification | Protein A or G purified from cell culture supernatant |
| Immunogen | Human embryonic kidney cell, HEK293-derived human Neurofascin Ile25-Trp1039 Accession # NP_055905 |
| 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 0.5 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. <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

Neurofascin, a type I transmembrane glycoprotein, is a member of the L1 family of cell adhesion molecules (CAMs) (1-4). L1CAM family members are composed of an extracellular domain (ECD) that contains six immunoglobulin (Ig)-like domains and multiple fibronectin type III repeats, followed by transmembrane and cytoplasmic domains (2, 4, 5). Multiple isoforms of Neurofascin, including NF155, NF166, NF180, and NF186, can be generated by alternative splicing with a predicted range of approximately 70 kDa to 150 kDa (4). These isoforms differ in the combination of fibronectin type III repeats, as well as in the presence of a proline-, alanine-, and threonine-rich segment (PAT domain) located just after the fourth fibronectin type III repeat (4). This recombinant human Neurofascin protein corresponds to rat isoform NF155 and shares 96% amino acid sequence identity with comparable regions of rat and mouse Neurofascin. In rats, NF155 is transiently expressed by oligodendrocytes and Schwann cells during axon myelination (6, 7). NF155 clusters in paranodal regions of oligodendroglia and binds to the Caspr-Contactin complex located on the adjacent axon to form and stabilize paranodal axoglial junctions (8-11). It has been suggested that the ECD of NF155 must be cleaved from oligodendroglia membranes to form and/or stabilize the paranodal structure (12). NF155 has also been shown to promote neuronal adhesion and neurite outgrowth in rats and chickens (12-14). Alterations in NF155 expression have been associated with multiple sclerosis (15).

References:

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