

DESCRIPTION

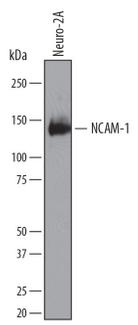
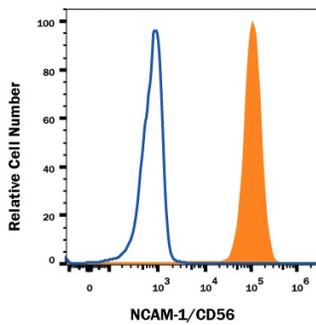
Species Reactivity	Mouse
Specificity	Detects mouse NCAM-1/CD56 in direct ELISAs and Western blots.
Source	Monoclonal Rat IgG _{2A} Clone # 809220
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse NCAM-1/CD56 Leu20-Thr711 Accession # P13595
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	0.1 µg/mL	See Below
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

<p>Western Blot</p>  <p>Detection of Mouse NCAM-1/CD56 by Western Blot. Western blot shows lysates of Neuro-2A mouse neuroblastoma cell line. PVDF membrane was probed with 0.1 µg/mL of Rat Anti-Mouse NCAM-1/CD56 Monoclonal Antibody (Catalog # MAB7820) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for NCAM-1/CD56 at approximately 120 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Flow Cytometry</p>  <p>Detection of NCAM-1/CD56 in Neuro-2A Mouse Cell Line by Flow Cytometry. Neuro-2A mouse neuroblastoma cell line was stained with Rat Anti-Mouse NCAM-1/CD56 Monoclonal Antibody (Catalog # MAB7820, filled histogram) or isotype control antibody (Catalog # MAB006, open histogram), followed by Allophycocyanin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0113). View our protocol for Staining Membrane-associated Proteins.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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

NCAM-1 (Neural adhesion molecule-1; also CD56) is a 120-190 kDa glycoprotein member of the Ig Superfamily. It is expressed on multiple cell types, both in the embryo and adult. Here, it serves as both an adhesion molecule and a receptor for multiple ligands, including as FGFR, PDGF, GDNF and agrin. On the cell surface, it is a cis-oriented homodimer that can form homodimers in-trans with other cis-homodimers. In the embryo, NCAM-1 is polysialylated (PolySia), and shows a MW of 200-220 kDa in SDS-PAGE. This polysialylation reduces the ability of NCAM-1 to dimerize. Mature mouse NCAM-1 is a 1096 amino acid (aa) type I transmembrane (TM) protein (aa 20-1115). It possesses a 692 aa extracellular region (aa 20-711) and a 386 aa cytoplasmic domain. The extracellular region contains five consecutive C2-type Ig-like domains (aa 20-492) followed by two FN type-III domains (aa 497-692). Multiple splice variants exist. There is a 140 kDa TM variant that shows a deletion of aa 810-1076, and a 120 kDa variant that is GPI-linked and shows a 24 aa substitution for aa 702-1115. A third potential variant contains a five aa substitution for aa 601-1115. Over aa 20-711, mouse NCAM-1 shares 99% and 95% aa identity with rat and human NCAM-1, respectively.