Human Plexin A4
Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 707206

Catalog Number: FAB58561G

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Plexin A4 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Plexin A1, recombinant mouse (rm) Plexin A1 or rmPlexin A2 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 707206
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Plexin A4 Thr24-Pro1237 Accession # Q9HCM2
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

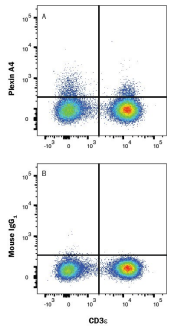
APPLICATIONS

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	0.25-1 µg/10^6 cells	Human peripheral blood lymphocytes

DATA

Flow Cytometry



Detection of Plexin A4 in Human Blood Lymphocytes by Flow Cytometry. Human peripheral blood lymphocytes were stained with either (A) Mouse Anti-Human Plexin A4 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB58561G) or (B) Mouse IgG1 Isotype Control (Catalog # IC002G) and Mouse Anti-Human CD3e APC-conjugated Monoclonal Antibody (Catalog # FAB100A). Staining was performed using our Staining Membrane-associated Proteins protocol.

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.

bio-techne®
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

Plexin A4 is a 220-230 kDa member of the plexin A subfamily, plexin family of proteins (1). It is found on sensory, autonomic and motor neurons and oligodendrocytes, plus T cells and dendritic cells (1-8). Mature human Plexin A4 is an 1871 amino acid (aa) type I transmembrane glycoprotein with a 23 aa signal sequence, a 1214 aa extracellular domain (ECD), and a 636 aa cytoplasmic region. The ECD contains one Sema-domain (aa 51-482), three PSI domains (aa 509-856) and four IPT regions (aa 858-1230) that contain a phosphoserine at aa 946 (1). Of three isoform variants, one shows a 65 aa substitution for aa 458-1894, a second shows an 80 aa substitution for aa 1292-1894, and a third shows the just mentioned 80 aa substitution coupled to a 14 aa substitution for aa 1-535 (9). The human Plexin A4 ECD shares 97% aa identity with mouse, equine, canine, and bovine Plexin A4. Full-length Plexin A4 also shares 67% aa identity with the most related family member, Plexin A2. Plexin A4 regulates cell migration, activation and axon guidance via repulsion (1-5). It serves as a receptor for transmembrane semaphorins, Sema6A and 6B, and as a coreceptor with neuropilin-1 for the secreted semaphorin, Sema3A (1-8). During development, it plays a role in nerve migration and midline crossing and down-regulates dendrite formation (2-8). It is often co-expressed with Plexin A3, which can also engage class 6 semaphorins but prefers Sema3F/neuropilin-2 to Sema3A/neuropilin-1 (3, 8). Thus, Plexins A3 and A4 are redundant in some functions, but unique in others. In T cells, Plexin A4 engages Sema3A and negatively regulates TCR signals (6).

References:

1. Suto, F. *et al.* (2003) Mech. Dev. **120**:385.
2. Suto, F. *et al.* (2005) J. Neurosci. **25**:3628.
3. Faulkner, R.L. *et al.* (2008) Neural Dev. **3**:21.
4. Waimey, K.E. *et al.* (2008) Dev. Biol. **315**:448.
5. Runker, A.E. *et al.* (2008) Neural Dev. **3**:34.
6. Yamamoto, M. *et al.* (2008) Int. Immunol. **20**:413.
7. Okada, A. *et al.* (2007) Biochem. Biophys. Res. Commun. **352**:158.
8. Yaron, A. *et al.* (2005) Neuron **45**:513.
9. Protein Accession # NP_861440, EAW83796, EAL24077.

PRODUCT SPECIFIC NOTICES

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
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