Human Plexin B3
Alexa Fluor® 594-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 905805

Catalog Number: FAB4958T

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Plexin B3 in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 905805
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Plexin B3 His45-Gln1255 Accession # Q9ULL4
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL 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	A172 human glioblastoma cell line

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.

BACKGROUND

Plexin B3 is a type I transmembrane glycoprotein that belongs to the Plexin B subfamily of semaphorin receptors (1, 2). Human Plexin B3 contains a 44 amino acid (aa) signal sequence, a 1211 aa extracellular domain (ECD), a 21 aa transmembrane domain, and a 633 aa cytoplasmic domain that includes features common to other Plexins, such as an LRR (C1) and LRF (C2) domain, and a PDZ motif common to B Plexins (1). The PDZ motif is thought to be involved in RhoA activation and axonal growth cone collapse downstream of semaphorin engagement (3). The human Plexin B3 ECD shares 81%, 81%, 83% and 75% aa identity with mouse, rat, bovine and canine Plexin B3, respectively. It contains a sema domain and a Plexin-Semaphorin-Integrin (PSI) or Met-Related Sequence (MRS) domain, each of which contains a potential proteolytic cleavage site (2). Detection of 160 and 140 kDa species along with the full-length 260 kDa Plexin B3 in homogenates of human neocortex indicates that proteolytic processing may occur *in vivo* (2). The ECD also contains four glycine/proline-rich IPT/TIG domains, which are immunoglobulin-like domains found in Plexins, transcription factors, and the scatter factor receptors Met and Ron. B Plexins, including Plexin B3, can interact with Met and Ron, activating these receptors upon semaphorin engagement (4, 5). Plexin B3 and its identified ligand, the transmembrane semaphorin Sema5A, are both expressed during differentiation and migration of central nervous system oligodendrocytes (5-7). However, the developmental functions of Sema5A are likely independent of Plexin B3, which is not significantly expressed prenatally (8). In turn, Plexin B3 may exhibit Sema5A-independent activity, as homophilic interactions of sema domains are reported to stimulate neurite outgrowth of postnatal cerebellar neurons (2).

References:

1. Negishi, M. *et al.* (2005) Cell. Mol. Life Sci. **62**:1363.
2. Hartwig, C. *et al.* (2005) BMC Neurosci. **6**:53.
3. Swiercz, J.M. *et al.* (2002) Neuron **35**:51.
4. Conrotto, P. *et al.* (2004) Oncogene **23**:5131.
5. Artigiani, S. *et al.* (2004) EMBO Rep. **5**:710.
6. Goldberg, J.L. *et al.* (2004) J. Neurosci. **24**:4989.
7. Worzfeld, T. *et al.* (2004) Eur. J. Neurosci. **19**:2622.
8. Fiore, R. *et al.* (2005) Mol. Cell. Biol. **25**:2310.

PRODUCT SPECIFIC NOTICES

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