Human Integrin α3/CD49c Alexa Fluor® 350-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # IA3

Catalog Number: FAB1345U

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Integrin α3/CD49c.
Source	Monoclonal Mouse IgG_1 Clone # IA3
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human milk epithelial cell line
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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	HT1080 human fibrosarcoma 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

VLA-3 (Very Late Antigen 3) is a member of the integrin family, β1 subfamily, of cell membrane adhesion molecules (1-3). Integrins are nondisulfide-linked transmembrane (TM) heterodimers that contain an α- and β-subunit (1). VLA-3 is composed of an α3 and β1 subunit. The α3/CD49c subunit is a 130-150 kDa type I TM glycoprotein. It only associates with the β1 integrin subunit. It is synthesized as a 1051 amino acid (aa) precursor that undergoes proteolytic cleavage to generate a disulfide-linked 110 kDa, 843 aa extracellular heavy chain and a 30 kDa, 176 aa TM/cytoplasmic light chain (1, 4, 5, 6). The heavy chain contains seven 60 aa repeats that fold into a propeller-like structure (7). Sequences involving the first three repeats are associated with ligand binding (1). The light chain has two cytoplasmic alternate splice forms. The A form cytoplasmic domain is 52 aa, while the B form cytoplasmic domain is 37 aa (5). Human α3 heavy chain is 88% aa identical to mouse heavy chain. VLA-3 is known to bind fibronectin, collagen, and laminin-1, 5, 8, 10 and 11 (1). It also binds tetraspanins such as CD9, CD63 and CD151. CD151 binding may actually stabilize VLA-3, enabling it to bind to additional factors (8).

References:

1. Tsuji, T. *et al.* (2004) J. Membr. Biol. **200**:115.
2. Gu, J. and N. Taniguchi (2004) Glycoconj. J. **21**:9.
3. Kreidberg, J.A. (2000) Curr. Opin. Cell Biol. **12**:548.
4. Takada, Y. *et al.* (1991) J. Cell. Biol. **115**:257.
5. de Melker, A.A. *et al.* (1997) Lab. Invest. **76**:547.
6. Krokhin, O.V. *et al.* (2003) Biochemistry **42**:12950.
7. Springer, T.A. (2002) Curr. Opin. Struct. Biol. **12**:802.
8. Nishiuchi, R. *et al.* (2005) Proc. Natl. Acad. Sci. USA **102**:1939.

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