Product datasheet MON2031

Mouse anti-Beta 1 Integrin, clone BV7 (Monoclonal)

Clone no. BV7

MONOSAN

Product name	Mouse anti-Beta 1 Integrin, clone BV7 (Monoclonal)
Host	Mouse
Applications	FC,FUNC,ELISA,IP,WB
Species reactivity	human
Conjugate	-
Immunogen	Unknown or proprietery to MONOSAN and/or its suppliers
Isotype	IgG1
Clonality	Monoclonal
Clone number	BV7
Size	1 ml
Concentration	100 ug/ ml
Format	-
Storage buffer	PBS with 0.1% BSA and 0.02% sodium azide
Storage until expiry date	2-8°C

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES

Product datasheet MON2031

Mouse anti-Beta 1 Integrin, clone BV7 (Monoclonal)

Clone no. BV7

MONOSAN

Additional info

The monoclonal antibody BV7 recognizes human ÃŸ1-integrin. Beta-1 integrin is a ubiquitously expressed ~89 kDa type I transmembrane protein functioning as receptor when heterodimerized with one alpha subunit. It belongs to the integrin beta chain family consisting of four different genes, encoding multiple Î²-integrins via alternative splicing. Ligand-recognition depends on the composition of the heterodimer: either collagen, fibronectin, VCAM1, laminin, cytotactin, osteopontin, epiligrin, thrombospondin and CSPG4 can bind to the integrin-complex. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform beta-1B interferes with isoform beta-1A resulting in a dominant negative effect on cell adhesion and migration (in vitro). In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions. When associated with α7, Î²1-integrin regulates cell adhesion and laminin matrix deposition. BV7 is active on HT-29 colon carcinoma cells and on HCCP-2998 tumor cells. It is involved in promoting endothelial cell motility and angiogenesis. Furthermore, Î²1-integrin plays a mechanistic adhesive role during telophase, and is required for the successful completion of cytokinesis. Upon activation integrins in general, including Î²1-integrin, are known to exhibit global structural rearrangements and exposure of ligand binding sites. Î²1-integrin modulation is of importance in tissue repair and regeneration. In cultured primary hippocampal neurons, astrocytes and tissues, cell surface expression of amyloid beta fibrils (key hallmark of Alzheimerâ€™s disease) selectively co-localized with Î²1-integrin. Preincubation of cells with antibodies against Î²1-integrin, as well as α1-integrin, greatly enhanced amyloid beta-induced apoptosis, indicating a protective role for integrins in apoptosis. The monoclonal antibody BV7 does not recognize α5Î²1 complex and not the cytoplasmic part of the Î²1-subunit. Monoclonal antibody BV7 is active on HT-29 colon carcinoma cells and on HCCP-2998 tumor cells. BV7 binds to several other tumor cells (MG3 osteosarcoma, A375 melanoma, MHCC- 1410 and Lovo colon carcinoma)

References

1. Martin-Padura; I et al. J Biol Chem 1994; 269: 6124
2. Palmieri, D et al J Biol Chem 2000, 275: 32658
3. Martel; V et al. J Cell Sci 2000; 113: 1951
4. Hofmann G et al. J Biol Chem 2001; 276: 4923
5. Bozzo C et al. Mol Cell Neurosci 2004; 25: 1

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES