Technical Data Sheet Purified Mouse Anti-Human CD57

Product Informatio

Material Number:	559048
Size:	0.2 mg
Concentration:	1.0 mg/ml
Clone:	HNK-1
Immunogen:	Membrane extracts of the HSB-2 T-lymphoblastoid cell line
Isotype:	Mouse IgM, ĸ
Reactivity:	QC Testing: Human
Workshop:	NA
Storage Buffer:	Aqueous buffered solution containing ${\leq}0.09\%$ sodium azide.

Description

Anti-HNK-1 monoclonal antibody recognizes a 110 kD glycoprotein (CD57) that is expressed on a subset of natural killer (NK) lymphocytes and T lymphocytes. It also recognizes epitopes on neural or neuroectodermal tumors including neurofibromas, malignant melanomas, malignant peripheral neuroectodermal tumors, Ewing's sarcomas, and small-cell lung carcinomas. Anti-HNK-1 monoclonal antibody also recognizes a carbohydrate epitope on subpopulations of several cell-adhesion molecules including N-CAM and myelin-associated glycoprotein (MAG).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at 4°C.

Application Notes

Application

Flow cytometry	Routinely Tested
Functional assay	Reported
Immunohistochemistry-paraffin	Reported
Western blot	Reported

Recommended Assay Procedure:

Functional Studies: Anti-HNK-1 monoclonal antibody recognizes a subset of NK lymphocytes and T lymphocytes. Unlike the populations of cells recognized by Anti-N-CAM monoclonal antibodies that share the unique ability to mediate direct, non-major histocompatibility complex-restricted cytotoxicity against certain tumor cells, the T lymphocytes recognized by anti-HNK-1 monoclonal antibody do not have NK activity. Anti-HNK-1 monoclonal antibodies can be used with other anti-N-CAM monoclonal antibodies to better understand the role of HNK-1 and N-CAM in leukocyte cytolytic activity against tumor cells. Anti-HNK-1 monoclonal antibody can be used in studies on the role of N-CAM and HNK-1 in the development and regulation of neuroendocrine tissues and muscle regeneration.

Immunohistology: Anti-HNK-1 monoclonal antibody can be used to stain paraffin-embedded tissues.

Immunoblotting: Anti-HNK-1 monoclonal antibody can be used in Western blot analysis.

Suggested Companion Products

Catalog Number	Name	Size	Clone
555581	Purified Mouse IgM, κ Isotype Control	0.1 mg	G155-228
555988	FITC Goat Anti-Mouse IgG/IgM	0.5 mg	Polyclonal

Product Notices

- 1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.

BD Biosciences

bdbiosciences.com							
United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean		
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995		
For country-specific contact information, visit bdbiosciences.com/how_to_order /							
Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation							
of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the							
use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone							
product or as a component of another product. Any use of this product other than the permitted use without the express							
written authorization of Becton Dickinson and Company is strictly prohibited.							
For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.							
BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD							



3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.

References

Abo T, Balch CM. A differentiation antigen of human NK and K cells identified by a monoclonal antibody (HNK-1). *J Immunol.* 1981; 127(3):1024-1029.(Biology) Bunn PA Jr, Linnoila I, Minna JD, Carney D, Gazdar AF.. Small cell lung cancer, endocrine cells of the fetal bronchus, and other neuroendocrine cells express the Leu-7 antigenic determinant present on natural killer cells.. *Blood.* 1985 March; 65(3):764-768.(Biology)

Caillaud JM, Benjelloun S, Bosq J, Braham K, Lipinski M.. HNK-1-defined antigen detected in paraffin-embedded neuroectoderm tumors and those derived from cells of the amine precursor uptake and decarboxylation system.. *Cancer Res.* 1984 October; 44(10):4432-4439.(Biology)

Hemperly JJ, Murray BA, Edelman GM, Cunningham BA. Sequence of a cDNA clone encoding the polysialic acid-rich and cytoplasmic domains of the neural cell adhesion molecule N-CAM. Proc Natl Acad Sci U S A. 1986; 83(9):3037-3041. (Biology)

Jin L, Hemperly JJ, Lloyd RV. Expression of neural cell adhesion molecule in normal and neoplastic human neuroendocrine tissues. Am J Pathol. 1991; 138(4):961-969. (Biology)

Kruse J, Mailhammer R, Wernecke H, Faissner A, Sommer I, Goridis C, Schachner M.. Neural cell adhesion molecules and myelin-associated glycoprotein share a common carbohydrate moiety recognized by monoclonal antibodies L2 and HNK-1.. Nature. 1984 September; 311(5982):153-155.(Biology)

Lanier LL, Le AM, Civin CI, Loken MR, Phillips JH. The relationship of CD16 (Leu-11) and Leu-19 (NKH-1) antigen expression on human peripheral blood NK cells and cytotoxic T lymphocytes. J Immunol. 1986; 136(12):4480-4486. (Biology)

Lanier LL, Le AM, Phillips JH, Warner NL, Babcock GF. Subpopulations of human natural killer cells defined by expression of the Leu-7 (HNK-1) and Leu-11 (NK-15) antigens. J Immunol. 1983; 131(4):1789-1796. (Biology)

Lipinski M, Braham K, Caillaud JM, Carlu C, Tursz T.. HNK-1 antibody detects an antigen expressed on neuroectodermal cells.. J Exp Med. 1983 November; 158(5):1775-1780.(Biology)

Llombart-Bosch A, Lacombe MJ, Peydro-Olaya A, Perez-Bacete M, Contesso G.. Malignant peripheral neuroectodermal tumours of bone other than Askin's neoplasm: characterization of 14 new cases with immunohistochemistry and electron microscopy.. Virchows Arch A Pathol Anat Histopathol. 1988; 412(5):421-430. (Biology)

Manara GC, De Panfilis G, Ferrari C.. Ultrastructural characterization of human large granular lymphocyte subsets defined by the expression of HNK-1 (Leu-7), Leu-11, or both HNK-1 and Leu-11 antigens. *J Histochem Cytochem.* 1985 November; 33(11):1129-1133.(Biology)

Mechtersheimer G, Staudter M, Möller P.. Expression of the natural killer cell-associated antigens CD56 and CD57 in human neural and striated muscle cells and in their tumors.. *Cancer Res.* 1991 February; 51(4):1300-1307.(Biology)

Pinto A, Grant LH, Hayes FA, Schell MJ, Parham DM.. Immunohistochemical expression of neuron-specific enolase and Leu 7 in Ewing's sarcoma of bone.. Cancer. 1989 September; 64(6):1266-1273.(Biology)

Schubert W, Zimmermann K, Cramer M, Starzinski-Powitz A. Lymphocyte antigen Leu-19 as a molecular marker of regeneration in human skeletal muscle. Proc Natl Acad Sci U S A. 1989; 86(1):307-311. (Biology)

Smolle J, Walter GF, Kerl H.. Myelin-associated glycoprotein in neurogenic tumours of the skin: an immunohistological study using Leu-7 monoclonal antibody.. Arch Dermatol Res. 1985; 277(2):141-142.(Biology)

Swanson PE, Manivel JC, Wick MR.. Immunoreactivity for Leu-7 in neurofibrosarcoma and other spindle cell sarcomas of soft tissue.. Am J Pathol. 1987 March; 126(3):546-560. (Biology)