

**International Blood Group
Reference Laboratory**500 North Bristol Park
Northway
Filton
Bristol
BS34 7QH**Antigen** NK cells and Germinal Centre B cells**Clone** BIRMA K65**Product Code** 9446**Immunoglobulin Class** Mouse IgG1, kappa light chain**Protein Development
and Production Unit****Tel:** +44 (0)117 921 7500**Fax:** +44 (0)117 912 5796**Website:** <http://ibgri.blood.co.uk>**Email:** enquiries.IBGRL@nhsbt.nhs.uk**Antigen Description and Distribution**

Natural killer (NK) cells are large granular lymphocytes with a characteristic morphology. NK lymphocytes account for up to 15% of blood lymphocytes and provide a first line defense against some tumor and virally infected cells. NK cells do not express conventional receptors for antigen i.e. surface immunoglobulin or T cell receptors. The ability of NK lymphocytes to recognize and kill tumor cells but not normal cells is due to several specialized receptors that recognize MHC class I molecules expressed on normal cells. The lack of expression of one or more class I alleles, as can occur during viral infection or tumor transformation, leads to NK-mediated cytotoxicity towards target cells. Most surface antigen detectable on NK lymphocytes by monoclonal antibodies are shared with T cells or monocytes/macrophages.

Clone

BIRMA K65 was made in response to Human Kg-1a cells. BIRMA K65 was submitted to the VIth Leucocyte Typing workshop¹. BIRMA K65 recognizes a 2,3-linked sialoglycoprotein on B cells and its epitope is susceptible to Newcastle disease neuraminidase². BIRMA K65 shows distinctive cell and tissue reactivity patterns: in lymphoid tissue sections it stains germinal centre but not mantle zone B cells. BIRMA K65 is not restricted to react only with germinal centre B cells since on FACS analysis it also reacts with a minority of peripheral blood cells (e.g. NK cells) and with the U937 myeloid line. BIRMA K65 immunoprecipitates a single high molecular weight band Mr. 240 kDa which reduces in size to 180 kDa following Endo F treatment. This suggests that it may represent a new CD45 specificity. BIRMA K65 strongly labels formalin-fixed paraffin-embedded tissues. BIRMA K65 causes homotypic adhesion of Kg-1a cells which is inhibited by EDTA and CD11a.

References

1. Mason D.Y. et al (1998) Proceedings of the sixth workshop and conference on white cell differentiation antigens, held in Japan 1996 Ed. Kishimoto T. p 206-229.
2. Schwartz-Albiez R. et al (1995) In Leucocyte typing V (Ed. Schlossman S.F. et al) pp 580-6.