

**International Blood Group
Reference Laboratory**500 North Bristol Park
Northway
Filton
Bristol
BS34 7QH

Antigen	Blood Group B
Clone	BRIC 250
Product Code	9470
Immunoglobulin Class	Mouse IgM Kappa

**Protein Development
and Production Unit**Tel: +44 (0)117 921 7500
Fax: +44 (0)117 912 5796Website: <http://ibgri.blood.co.uk>Email: enquiries.IBGRL@nhsbt.nhs.uk**Antigen Description and Distribution**

The histo-blood group B antigen is defined by the carbohydrate structure at the non-reducing termini of oligosaccharide chains of glycoproteins and glycolipids. Carbohydrate chains are synthesized by the action of α -D-galactosyltransferase, which catalyzes the transfer of D-galactose monosaccharide to an acceptor substrate called the H antigen.

The structure of the B antigen is $\text{Gal}(\alpha 1-3)\text{Gal}(\beta 1-3)\text{GlcNAc-R}$
Fuc ($\alpha 1-2$)

ABO, of which the B antigen is part of, is the most important blood group system from the clinical blood transfusion perspective. Approximate frequencies of ABO phenotypes in southern England are as follows: O 43%, A 45%, B 8% and AB 4%; but frequencies vary throughout the world. The B antigen is widely distributed on erythrocytes, cells and tissues, and is present, in soluble form, in body fluids of B positive individuals. About 20% of group B people secrete no B substance because their secretions contain no H antigen although they are still blood group B because the H antigen is still present on their erythrocytes. In a rare phenotype, the Bombay phenotype, no H is present in secretions or on the erythrocytes and consequently no A or B are present.

Clone

BRIC 250 was made in response to immunisation with blood group B ovarian cyst fluid. BRIC 250 directly agglutinates untreated blood group B erythrocytes. BRIC 250 gives good detection of weak B phenotypes and does not react with acquired B. BRIC 250 does not auto-immune precipitate in the cold.

References

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