IBGRL RESEARCH PRODUCTS

NHS Blood and Transplant

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

Protein Development and Production Unit
Tel: +44 (0)117 921 7500
Fax: +44 (0)117 912 5796
Website: http://ibgrl.blood.co.uk
Email: enquiries.IBGRL@nhsbt.nhs.uk

Antigen	H (ISBT No. 18001) / CD 173
Clone	BRIC 198
Product Code	9420
Immunoglobulin Class	Mouse IgG1, kappa light chain

Antigen Description and Distribution

H antigens are carried on the non-reducing termini of the carbohydrates of glycoproteins and glycolipids. The H determinant structure is Fuc(α1-2) Gal(ß1)-R. Type 1 and type 2 H (CD 173) are determined by the subterminal (peripheral core) carbohydrate sequence. In H type 1 it is Fuc (α1-2) Gal(ß1-3) GlcNAc, in H type 2 it is Fuc(α1-2) Gal(ß1-4) GlcNAc. H is the precursor of the A and B histo-blood group antigens, which are formed by the addition of GalNAc(α1-3) or Gal(α1-3) respectively, to the galactose of H[1]. In man, H active substances are found on the erythrocytes, cells and tissues, and in the body fluids, linked to lipids (glycosphingolipids) or to proteins (glycoproteins). In various animals, H antigens occur in the cells and tissues, but not generally on erythrocytes. The synthesis of H type 1 and H type 2 in man in different tissues is controlled by either of the two linked genes *Se* and *H*, which code for 2-fucosyl transferases[2].

Clone

BRIC 198 was made in response to immunisation with group O erythrocytes. In haemagglutination tests it failed to react with Oh (Bombay) erythrocytes, and reacted more weakly than normal with A1 erythrocytes. BRIC 198 was absorbed by Synsorb H type 2, but not H type 1, Le^a, Le^b, A or B Synsorbs. BRIC 198 (MH1) was used in a workshop for glycomapping of the specificities of Lewis antibodies where it was shown that BRIC 198 cross reacted with Le^b and Le^y antigens[3].

References

1. Clausen H, Hakomori S. (1989) Vox Sang. **56** 1 - 20 (Review).
2. Oriel R, *et al* (1986) Vox Sang **51** 161 - 171 (Review).
3. Williams E *et al*. (2016) Transfusion 56 (2):325-33. Glycomapping the fine specificity of monoclonal and polyclonal Lewis antibodies with type-specific Lewis kodecytes and function-spacer-lipid constructs printed on paper.