

**International Blood Group
Reference Laboratory**500 North Bristol Park
Northway
Filton
Bristol
BS34 7QH**Antigen** H (ISBT No. 18001) / CD 173**Clone** BRIC 231**Product Code** 9421**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**

H antigens are carried on the non-reducing termini of the carbohydrates of glycoproteins and glycolipids. The H determinant structure is Fuc(α 1-2) Gal(β 1)-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 (α 1-2) Gal(β 1-3) GlcNAc, in H type 2 it is Fuc(α 1-2) Gal(β 1-4) GlcNAc. H is the precursor of the A and B histo-blood group antigens, which are formed by the addition of GalNAc(α 1-3) or Gal(α 1-3) respectively, to the galactose of H¹. 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 transferases².

Clone

BRIC 231 was made in response to immunisation with HEL cells. In haemagglutination tests it failed to react with Oh (Bombay) erythrocytes, and reacted more weakly than normal with A1 erythrocytes. BRIC 231 was absorbed by Synsorb H type 2, but not H type 1, Le^a, Le^b, A or B Synsorbs. BRIC 231 (MH2) was used in a workshop for glycomapping of the specificities of Lewis antibodies where it was shown that BRIC 231 cross reacted with Le^b and Le^y antigens³.

References

1. Clausen H, Hakomori S. (1989) *Vox Sang.* **56** 1 - 20 (Review).
2. Oriol 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.

Synsorb is a tradename of Chembiomed, Edmonton, Canada.