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| **Antigen** | H type 1 and 2 (ISBT No. 18001) / CD 173 |
| **Clone** | BRIC 39 |
| **Product Code** | 9419 |
| **Immunoglobulin Class** | Mouse IgM, λ lambda 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* or *H*, which code for 2-fucosyl transferases[2].

## Clone

BRIC 39 was made in response to immunisation with HLe$^b$ active ovarian cyst glycoprotein. It recognises both H type 1 and H type 2 structures. In haemagglutination - inhibiton tests, the antibody is inhibited by ovarian cyst glycoproteins with A, B or HLe$^b$ activity, but not inhibited by those with Le$^a$ activity. It is also inhibited by Synsorbs H type 1, H type 2 and Le$^b$, but not Le$^a$, A or B. BRIC 39 (MH3) was used in a workshop for glycomapping of the specificities of Lewis antibodies where it was shown that BRIC 39 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, Le Pendu J, Mollicone R. (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.