Antigen: Human Blood Group A

Clone: BRIC 145

Product Code: 9434

Immunoglobulin Class: Mouse IgG1, kappa light chain

Antigen Description and Distribution

The histo-blood group A 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-N-acetyl-D-galactosaminyl-transferase, which catalyzes the transfer of GalNAc monosaccharide to an acceptor substrate called the H antigen. The structure of the A antigen is GalNAc(α1-3)Gal(β1-3)GlcNAc-R

| Fuc (α1-2) |

ABO, of which the A 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 A antigen is widely distributed on erythrocytes, cells and tissues, and is present, in soluble form, in body fluids of A positive individuals. About 20% of group A people secrete no A substance because their secretions contain no H antigen although they are still blood group A 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. The A antigen is divided into 2 main subgroups, A₁ and A₂.

Clone

BRIC 145 was made in response to immunisation with a active ovarian cyst glycoprotein. BRIC 145 agglutinates blood group A erythrocytes. BRIC 145 has been used to measure the expression of blood group A antigens on platelets¹. BRIC 145 has been used to measure soluble ABO blood group substance in fresh-frozen plasma².

Further Reading