

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

Antigen	Le ^a (ISBT No. 7001) / CD 174
Clone	MAL A
Product Code	9501
Immunoglobulin Class	Mouse IgM, kappa light chain

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The Le^a antigen is the carbohydrate structure:- Gal(β1-3) Fuc(α1-4) GlcNAc(β1-R) or monofucosylated Type I chain. Depending on the tissue of origin, the antigen is found on cell surfaces and on glycoproteins in exocrine secretions of individuals of genotype se/se, Le^a-. Also found in circulating glycosphingolipids which are passively adsorbed to the surface of circulating cells¹.

Clone

MAL A was made in response to human Le^a saliva. The antibody reacts in haemagglutination tests preferentially by enzyme methods. The antibody reacts with papainized cells by sedimentation in microplate and tube. Following 15 minute incubation at RT and spin the titre with pap. Le^a +ve cells is 1/16-1/64. The papain/MAL-A mixture is still active after 1^{1/2} hours. The antibody also works if the papain is added with the antibody to saline cells 1:1:1 and spun immediately. The antibody does not react with cells suspended in saline, or saline plus LO-ION. The antibody reacts well with all ABO blood groups. The antibody has been used routinely in a saline tube test in a formulation containing 10% Dextran C 0.9% Bovine serum albumin. MAL A (MA15) was submitted to the workshop on glycomapping of monoclonal and polyclonal Lewis antibodies³ where its specificity was confirmed as anti-Le^a.

References

1. Oriel R *et al* (1986) Vox Sang. **51** 161-171 (review).
2. D.F.McDonald. C.Imhof. J.M.Thompson & G. Lovell (1991). A monoclonal anti-Le^A antibody for use in a one-stage papain test employing immediate spin. Transfusion Med. **1** (Suppl.2):49
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.