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	Human Blood Group Rh D (ISBT No. 4001) / CD240D
Clone	HAM A
Product Code	9485
Immunoglobulin Class	Human IgM, kappa light chain

Antigen Description and Distribution

The Rh D antigen (Rh_1 or Rh_o) is clinically the most important of the Rh blood group system. It is expressed on the extracellular loops of a transmembrane polypeptide of around Mr 30000[1]. Estimated numbers of Rh D sites recognised by HAM A on Rh D positive cells are between 15,200 to 19,800 on CDe/cDE (R_1R_2) cells[2]. In humans the Rh D antigen is expressed solely on the erythrocytes of Rh D positive individuals. 85% of Caucasians are Rh D positive.

Clone

The cell line producing HAM A is a human heterohybridoma derived from the fusion of EBV transformed B cells, from the peripheral blood of a donor producing high levels of anti-D, with X63Ag8.653 myeloma cells[3]. HAM A reacts as a direct agglutinin with all Rh D positive red cells except those of DV^a and D^{VI} , DFR, DBT, HMi, HMii, DRS and Ro^{Har}. Only reacts with "high grade" weak D. The designated epitope has been confirmed as epD5[4,5,6]. HAM A has a functional affinity constant of 1.0×10^7 M^{-1} at normal ionic strength[2]. On reducing the ionic strength by one third to 0.05M NaCl, the affinity constant increases to 6.3×10^8.

References

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