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<b>Antigen</b>	Human Blood Group Rh D (ISBT No. 4001) / CD240D
<b>Clone</b>	HAM B
<b>Product Code</b>	9486
<b>Immunoglobulin Class</b>	Human IgM, Lambda light chain

**Antigen Description and Distribution**

The Rh D antigen (Rh<sub>1</sub> or Rh<sub>0</sub>) 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<sup>1</sup>. Estimated numbers of Rh D sites recognised by HAM B on Rh D positive cells are between 13,000 to 22,800 on CDe/cDE (R<sub>1</sub>R<sub>2</sub>) cells<sup>2</sup>. 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 B 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<sup>3</sup>. HAM B reacts as a direct agglutinin with all Rh D positive red cells except those of DV<sup>a</sup> and D<sup>VI</sup> type confirming the designated epitope as epD5<sup>4</sup>. HAM B has a functional affinity constant of 5.1 x 10<sup>7</sup> M<sup>-1</sup> at normal ionic strength<sup>2</sup>. On reducing the ionic strength by one third to 0.05M NaCl, the affinity constant increases to 1.9 x 10<sup>8</sup>.

**References**

1. Cartron, J-P, (1994) Blood Reviews **8**, 199-212.
2. Hughes-Jones *et al* (1990) Vox Sang, **59**, 112-115.
3. Melamed *et al* (1987) J. Immunol. Methods **104**, 245-251.
4. Lomas *et al* (1989) Vox Sang, **57**, 261-264.