

## Anti-D<sup>VI</sup> monoclonal antibody

The antigen D of the human RH blood group system encompasses several epitopes. Number of variants have been described missing some of these epitopes. The D<sup>VI</sup> variant is the most frequent partial D antigen. Failure to identify D<sup>VI</sup> variant as RH positive individuals can lead to not detect all situations of fetomaternal or donor/receptient incompatibilities.

### DESCRIPTION\*

- Human monoclonal antibody able to detect a non conformation-dependent epitope of the D-antigen
  - Adapted to specifically recognize DVI variants
  - Adapted to work by Western blot on D antigens extracted from erythrocyte membrane
  - Cell line secreting the antibody and the production protocol)

Partial D category	Rh phenotype				Most probable genotype*	No. of samples	Band revealed by LOR-15C9	
	C	c	E	e			33 kD	21 kD
D <sup>IIIa</sup>	-	+	-	+	R <sup>0</sup> r	1	+	-
D <sup>IIIa</sup>	+	+	-	+	R <sup>1</sup> r	2	+	-
D <sup>IIIb</sup>	-	+	+	-	R <sup>2</sup> r''	1	-	-
D <sup>IIIb</sup>	-	+	+	+	R <sup>2</sup> r	1	-	-
D <sup>IIIc</sup>	+	+	-	+	R <sup>1</sup> r	3	+	-
D <sup>IVa</sup>	-	+	-	+	R <sup>0</sup> r	6	-	-
D <sup>IVb</sup>	+	+	-	+	R <sup>1</sup> r	5	-	-
D <sup>IVb</sup>	+	+	+	+	R <sup>1</sup> r''	1	-	-
D <sup>Va</sup>	+	+	-	+	R <sup>1</sup> r	2	+	-
D <sup>Va</sup>	-	+	-	+	R <sup>0</sup> r	2	+	-
D <sup>Va</sup>	-	+	+	+	R <sup>2</sup> r	1	+	-
D <sup>VI</sup>	+	+	-	+	R <sup>1</sup> r	28	+	+
D <sup>VI</sup>	-	+	+	-	R <sup>2</sup> r''	1	+	+
D <sup>VI</sup>	+	+	+	+	R <sup>1</sup> r''	1	+	+
D <sup>VI</sup>	-	+	+	+	R <sup>2</sup> r	8	+	+
D <sup>VII</sup>	+	+	-	+	R <sup>1</sup> r	4	+	-
DFR	+	+	-	+	R <sup>1</sup> r	1	+	-
DBT	+	+	+	+	R <sup>1</sup> r''	1	-	-
DBT	+	+	-	+	R <sup>1</sup> r	1	-	-

The antibody is capable to reveal by immunoblotting the classical D antigen (one band at 33kD) as well as partial D<sup>VI</sup> antigen variants (two bands at 33kD and 21kD).

### COMPETITIVE ADVANTAGES

- Human antibody with a D<sup>VI</sup> specific reactivity
- Able to detect both native (by agglutination) and denaturated D-antigen (by Western blot)

### APPLICATIONS

- Research tool for accurate studies on D-antigen and related subjects
- Donor blood testing for D<sup>VI</sup> detection

### INTELLECTUAL PROPERTY

- Biological material & secret know-how

### DEVELOPMENT STAGE

- Prototype tested in operational environment



### LABORATORY

- Laboratory of Molecular Immunogenetics



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