

## RhC (109): sc-52431

### BACKGROUND

The Rhesus (Rh) blood group system represents one of the most complex and important systems in humans. Two highly homologous genes RHD and RHCE (collectively referred to as RH30 or RHCED) encode the antigens of the Rh blood group system. These tightly linked genes map to human chromosomal position 1p34.1-1p36. The RHD gene, which is commonly deleted from a large segment of the population, encodes the most potent blood group immunogen, the D antigen. Rh incompatibility between maternal and fetal blood types results in hemolytic disease of the newborn (HDN), which often results in fetal death. The RHCE gene exists in four allelic forms and each allele determines the expression of two antigens in Ce, ce, cE or CE combinations. The RHCED antigens exist as integral membrane proteins with contain 12-transmembrane helices, and maintain erythrocyte membrane integrity. The presentation of the Rh antigenic activity requires the formation of a complex between the RHCED antigens and RHAG (RH50).

### REFERENCES

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2. Cherif-Zahar, B., Le Van Kim, C., Rouillac, C., Raynal, V., Cartron, J.P. and Colin, Y. 1994. Organization of the gene (RHCE) encoding the human blood group RhCcEe antigens and characterization of the promoter region. *Genomics* 19: 68-74.
3. Wagner, F.F. and Flegel, W.A. 2000. RHD gene deletion occurred in the Rhesus box. *Blood* 95: 3662-3668.
4. Narang, A. and Jain, N. 2001. Haemolytic disease of newborn. *Indian J. Pediatr.* 68: 167-172.
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### CHROMOSOMAL LOCATION

Genetic locus: RHD (human) mapping to 1p36.11.

### SOURCE

RhC (109) is a mouse monoclonal antibody raised against Rhesus blood group C antigen of human origin.

### PRODUCT

Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RhC (109) is available conjugated fluorescein (sc-52431 FITC, 100 tests in 2 ml), for IF, IHC(P) and FCM.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### APPLICATIONS

RhC (109) is recommended for detection of Rhesus blood group C antigen of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for RhC siRNA (h): sc-72146, RhC shRNA Plasmid (h): sc-72146-SH and RhC shRNA (h) Lentiviral Particles: sc-72146-V.

Molecular Weight of RhC: 46 kDa.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.