

Quantification of RhD positive fetal cells in blood of RhD negative women



FMH Kit

Special features

- Kit contains anti-RhD (BRAD 3) FITC and the control antibody (AEVZ 5.3) FITC
- Ready to use reagents
- Total assay time is 45 minutes, hands-on-time 15 minutes
- For use with flow cytometer
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Applications

- Determination of Fetomaternal Hemorrhage⁽¹⁾
- Pregnancy with suspected RhD incompatibilities⁽¹⁾

References

1. Lloyd-Evans et al, Use of a directly conjugated monoclonal anti-D (BRAD 3) for quantification of fetomaternal Hemorrhage by flow cytometry, *Transfusion*, 1996;36:432-437.

Background information

Detection and quantification of fetal red blood cells (fRBCs) in maternal blood samples is essential for obstetrical management. Measurement of fRBCs is critical as the extent of Fetomaternal Hemorrhage (FMH), the transplacental passage of fRBCs into the maternal circulation, has consequences for further treatment of mother and child. Frequency and size of FMH is directly influenced by complications in abdominal trauma, suspected placental injury or after a caesarean section. Severe FMH may lead to intra-uterine death. In case of antigen incompatibility between mother and child FMH may result in respiratory problems or anaemia, like Haemolytic Disease of the Newborn. Adult RBC's contain a population of HbF (F-cells), which can differ between 0 and 14%. The F-cells can give a positive result in the Kleihauer-Betke acid-elution test or single HbF flow cytometry test. These F-cells may be the result of physiological variations during pregnancy or traits such as thalassemia, sickle cell anaemia or hereditary persistence of fetal haemoglobin. The detection (and thus enumeration) of fRBCs is used to calculate the extent of FMH, either in case of trauma with suspected placental injury or in the situation of a RhD incompatibility between the fetus and the mother. The amount of fRBCs is a measure for the prevention of hemolytic disease of the newborn using (prophylactic) anti-D therapy.

Principle of the FMH Kit

By flow cytometry, BRAD 3 FITC can be used to do an accurately quantification of the number of RhD positive cells in a mixture of RhD positive and negative cells. Therefore FMH can be analyzed in a maternal blood sample when a negative woman carries a RhD positive fetus. For optimal interpretation of the results the kit contains an anti-RhD antibody (BRAD 3) and a negative control antibody (AEVZ 5.3) both labeled with FITC.

Item	Description	Package size	Product code
FMH kit ² IVD CE	FITC conjugated anti-RhD reagent for determination of Fetomaternal Hemorrhage	100 tests	9447
Anti-RhD	R-PE conjugated anti RhD (clone NaTH109-1G2)	100 tests	IQP-513R
Anti-RhD	APC conjugated anti RhD (clone BRAD3)	100 tests	IQP-556A
Related products			
Item	Description	Package size	Product code
Fetal Cell Count™ kit IVD CE	Complete assay for routine diagnosis of Fetomaternal Hemorrhage using anti-HbF and anti-CA	25 tests	IQP-379
FMH QuikQuant ¹ IVD CE	Rapid assay for Fetomaternal Hemorrhage Quantification	100 tests	QQF-100
Fetalrol™ ¹ IVD CE and FDA cleared	Tri-level stabilized blood controls with known human fetal erythrocytes content in human adult blood	3 levels, 2 mL each	IQP-370FT

IVD CE in vitro diagnostic medical device. The products are registered as IVD in the countries belonging to the European Union.

¹ Distributed for Trillium Diagnostics LLC, USA

² Distributed outside the UK for IBGRL Bristol, UK