

SOLVO MDQ Kit™ CE IVD

MultiDrug Resistance protein function measurement in hematology

Novelty

In acute myeloid leukemia (AML) and chronic lymphocytic leukemia (CLL), MDR protein function measurement in white blood cells is a prognostic and predictive marker. In AML, MDR protein function is an independent negative prognostic biomarker. Testing of MDR pump function has therefore multiple benefits for hematology patients: it allows patient risk stratification and can help choose a tailored treatment strategy contributing to better patient outcomes and quality of care. SOLVO MDQ Kit™ CE IVD is the first biomarker-based diagnostic kit for the detection of MDR protein function by flow cytometry.

Clinical relevance

- MDR protein function is an independent negative prognostic biomarker in AML
- The incidence of MDR in de novo AML patients is approximately 40%
- Conventional anticancer drugs (e.g.: Doxorubicin, Imatinib, etc.) are substrates of MDR transporters
- Elevated MDR protein activity can be correlated with prognosis, drug efficiency and disease activity
- MDR protein activity determination is a safety measure for patients on highly demanding cytotoxic/ immune suppressant drugs

Application in hematology

1. Forecasting disease prognosis in CN-AML patients (Figure 1.)

MDR protein function is an independent prognostic marker in AML for the intermediate prognostic group, especially in cases without cytogenetic abnormalities. Presence of elevated MDR activity related to any of the three drug efflux pumps MDR1, MRP1 or BCRP detected alone or simultaneously is seen as a negative prognostic marker.

2. Predicting the success of fludarabine-based induction therapy in AML patients

MDR protein function (MDR1, BCRP) is a predictive marker in cases where fludarabine-based induction therapy is applied.

3. Guiding therapy decisions in certain CLL patients

For CLL patients who do not fit the criteria for first line FCR therapeutic regimen, have relapsed, or have a refractory disease, MDR activity may help with further therapeutic considerations especially in the absence of other bad prognostic factors.

Features

- The kit is designed to determine the functional activity of the three clinically most relevant drug efflux proteins: MDR1, MRP1, and BCRP
- It contains two proprietary assays and measures the transporter activities selectively
- Uses highly selective inhibitors and different probe substrates for MDR1/MRP1 and BCRP
- Compatible with cell surface markers
- Contains ready-to-use reagents
- 10 independent MDR1/MRP1 and BCRP measurements could be carried out in triplicates
- Specimen: cell suspension, blood, bone marrow etc.: 6 hours stability before testing
- The first test results can be expected within 90 minutes

Availability

PRODUCT	SIZE	CAT. NO.
SOLVO MDQ Kit™ CE IVD	10 assays	MDQ0101D

Figure 1a – MDR1 and MRP1 activities in Acute Myeloid Leukemia on CD45+ cells

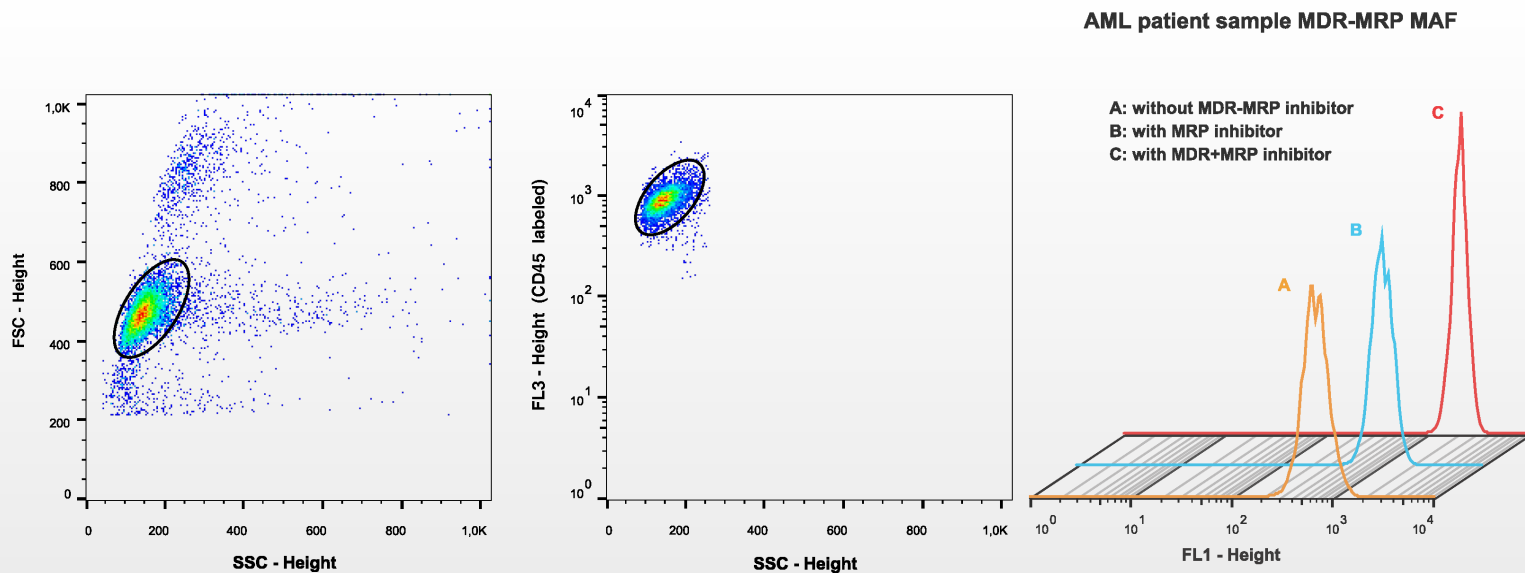
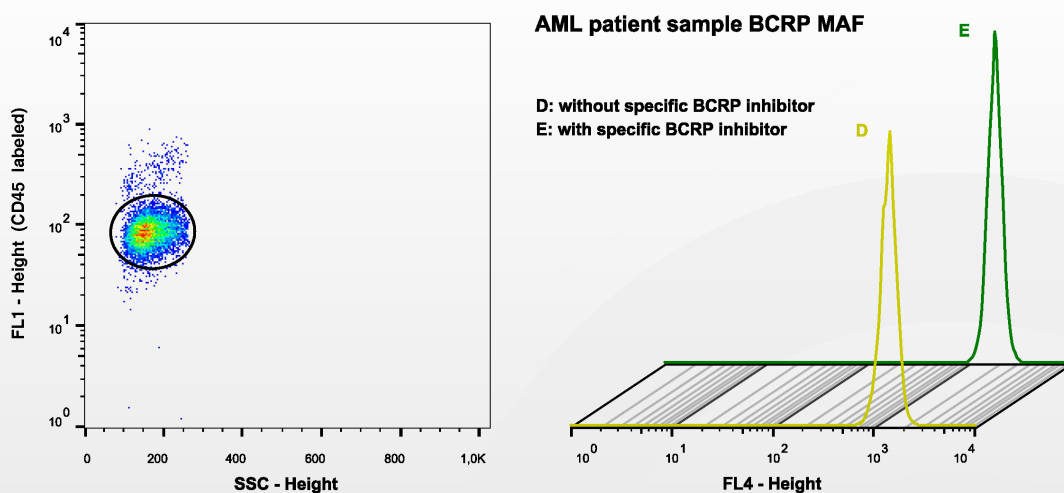


Figure 1b – BCRP activities in Acute Myeloid Leukemia on CD45+ cells



References

For further information and references check our website at: <http://www.solvomdqkit.com/product/for-clinical-hematologists>

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