

Xpert BCR-ABL 0%IS

INTENDED USE:

The Xpert BCR-ABL 0%IS is intended for use as an assayed external quality control to monitor the performance of the *in vitro* quantitative detection of BCR-ABL1 translocation mRNA e14a2/b3a2 transcripts and the ABL1 endogenous control mRNA transcript when analyzed using the Xpert® BCR-ABL Ultra assay on Cepheid GeneXpert® Instrument Systems.

The Philadelphia chromosome, a translocation between the ABL1 gene on chromosome 9 and the BCR gene on chromosome 22, designated as t(9;22), generates the fusion gene BCR-ABL1 which is present in most chronic myelogenous leukemia patients. Quantitative monitoring of BCR-ABL1 transcripts in patient blood is an important tool for measuring response to therapy. In 2009, the World Health Organization (WHO) developed a panel of four BCR-ABL1 primary standards to establish an international scale (IS), a standardized method for reporting assay results as a ratio of fusion transcripts to control gene transcripts (%IS), useful to the harmonization of patient care across laboratories worldwide.^{1,2} The %IS can also be expressed as molecular response (MR), the log reduction from a standardized baseline of 100% on the IS. The Xpert BCR-ABL IS Panel C130 is traceable to the WHO International Genetic Reference Panel for Quantitation of BCR-ABL Translocation (WHO Reference Panel), NIBSC code 09/138, and designed for use with the Xpert BCR-ABL Ultra assay which reports on the international scale.

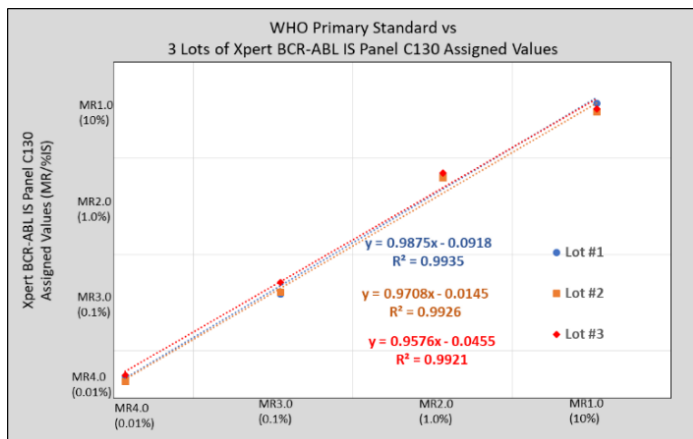
PRODUCT SUMMARY and PRINCIPLE:

Xpert BCR-ABL 0%IS is composed of one level, Xpert BCR-ABL 0%IS, which contains synthetic RNA transcripts of control gene ABL1. This control is designed to represent a sample with no fusion gene BCR-ABL1 present when analyzed on the GeneXpert system with the Xpert BCR-ABL Ultra assay. Xpert BCR-ABL 0%IS is a component of Xpert BCR-ABL IS Panel C130, part number C130.

Validation and Value Assignment

MMQCI manufactured 3 lots of Xpert BCR-ABL IS Panel C130 and tested them alongside the WHO Reference Panel, using one cartridge lot of the Xpert BCR-ABL Ultra assay. Grubb's outlier and the Bland-Altman tests were applied, lot-specific Correction Factors (CF) were calculated, and WHO-traceable %IS/MR values were assigned to each level of Xpert BCR-ABL IS Panel C130 for all 3 lots according to NIBSC Instructions for Use³. Figure 1. compares the 3 lots of Xpert BCR-ABL IS Panel C130 to the 4 members of the WHO Reference Panel. New lots of Xpert BCR-ABL IS Panel C130 will be assigned lot-specific %IS/MR values in the same manner.

Figure 1. Three lots of Xpert BCR-ABL IS Panel C130 calibrated to the WHO International Genetic Reference Panel for Quantitation of BCR-ABL Translocation.



COMPOSITION:

Xpert BCR-ABL 0%IS contains 5 single use bottles of Xpert BCF-ABL 0%IS consisting of synthetic ABL1 control gene transcript suspended in a stabilizing matrix with a non-infectious solution of buffers and preservatives.

STORAGE and STABILITY:

Xpert BCR-ABL 0%IS should be stored at -20°C. Unopened Xpert BCR-ABL 0%IS material is stable through the expiration date printed on the kit label when consistently stored frozen. Xpert BCR-ABL 0%IS is for single use. Discard after use according to your local and federal regulations.

INSTRUCTION FOR USE:

1. Allow the Xpert BCR-ABL 0%IS component to be tested to come completely to room temperature (18°C-25°C), approximately 30 minutes, until bottles are warm to the touch.
2. Immediately before pipetting, thoroughly mix the C130 panel component by inverting 8 times followed by 2 pulse vortexes, 2-3 seconds each at maximum speed.
3. Add 4mL of the Xpert BCR-ABL 0%IS component to 100µL of Proteinase K in a conical tube, as you would a blood specimen.
4. Continue with the assay procedure according to manufacturer's instructions.
5. Discard after use according to local and federal regulations.

PRECAUTIONS and WARNINGS:

- Use the control as provided. Do not dilute or transfer to another storage tube.
- This product is intended for *in vitro* diagnostic use only.
- Use Xpert BCR-ABL 0%IS only with Xpert BCR-ABL Ultra assay.
- Xpert BCR-ABL 0%IS is not intended to be used for calibration of the Xpert® BCR-ABL Ultra assay.
- This product is slightly cloudy in appearance.
- This product does not contain any biological material of human or animal origin. Universal Precautions are NOT required when handling this product.
- Xpert BCR-ABL 0%IS cannot be cloned, sold, or transferred without the explicit written consent of MMQCI.

EXPECTED VALUES:

The expected result of Xpert BCR-ABL 0%IS when tested with Xpert BCR-ABL Ultra assay on the GeneXpert system is: Negative (Sufficient ABL1 transcript).

Control	Reported Result
Xpert BCR-ABL 0%IS	Negative (Sufficient ABL transcript)

Routine use of quality controls that are consistent lot-to-lot assists the laboratory in identifying shifts, trends, and increased frequency of random errors caused by variations in the test system.

ORDERING INFORMATION:

Xpert BCR-ABL 0%IS

Part Number: C13112-5

Kit Contains: 5 bottles x 4mL

References

- ¹Branford S et al. Desirable performance characteristics for BCR-ABL measurement on an international reporting scale to allow consistent interpretation of individual patient response and comparison of response rates between clinical trials. *Blood* 2008, 112:3330-38
- ²White HE et al. Establishment of the first World Health Organization International Genetic Reference Panel for quantitation of BCR-ABL mRNA. *Blood* 2010, 116:e111-117
- ³1st WHO International Genetic Reference Panel for Quantitation of BCR-ABL Translocation, NIBSC code: 09/138 Instructions for use (Version 4.0, Dated 13/12/2012)