

gb ONCO JAK2 (V617F)

Clinical implications

The JAK2 enzyme is involved in the signaling pathway leading to blood cell production. Substitution of the amino acid valine for phenylalanine at position 617 leads to uncontrolled cell proliferation and survival of hematopoietic precursors. Somatic mutation occurs in most patients with diseases such as essential thrombocythemia and chronic idiopathic myelofibrosis. A higher risk of complications (thrombosis, abortion, etc.) is generally expected in carriers of this mutation.

Principle of detection

The kit is used for detection and quantification of somatic mutation V617F JAK2 gene in human genomic DNA. The detection principle is based on **real-time PCR using fluorescently labeled probes and allele specific primers.**

Available products

Cat. No.	Product	rxn
3242-024	gb ONCO JAK2 (V617F)	24
3242-048	gb ONCO JAK2 (V617F)	48

1 kit contains reagents to provide 24 or 48 PCR reactions (25 µl volume of each reaction).

Parameters of the diagnostic kit

- RUO
- ready-to-use assay
- LOD 0.26% mutated JAK2 on WT background at 100,000 copies in reaction
- sample concentration 10-80 ng/µl
- positive and negative controls included
- FAM channel detection
- identical amplification profile as gb HEMO, gb GENETIC, gb PHARM kits

Content of the diagnostic kit

* Component	Conc.	Purpose
● Assay qPCR JAK2 Control	1.25×	Control assay
● Assay qPCR JAK2 MUT V617F	1.25×	Detection assay
● Deionized Water		Negative Control
● Standard WT JAK2 V617F	10 ⁴ cop/µl	Positive Control
● Standard MUT 1% JAK2 V617F	10 ⁴ cop/µl	Positive Control

*Lid colour



Validated for cyclers

- Rotor-Gene 6000/Q (Corbett Research, Qiagen)
- CFX96/CFX96 Touch (Bio-Rad)
- Light Cycler 480/Cobas z480 (Roche Diagnostics)
- QuantStudio 5 (Applied Biosystems)





RUO

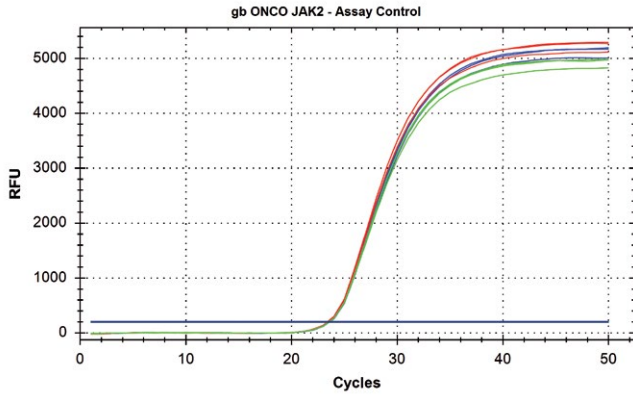


Fig. 1 - Detection of assay Control on CFX96 device; red line - MUT; green line - 1% MUT; blue line - WT

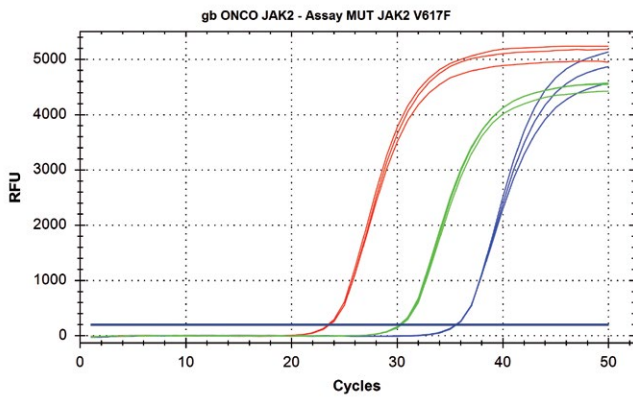


Fig. 2 - Detection of assay Control on CFX96 device; red line - MUT; green line - 1% MUT; blue line - WT

Note

Selling, offering, storage and usage of the product in some countries may infringe valid patent rights under patent EP 1692281 and its equivalents.