

## TRUPCR® MPN Panel Kit

### NEED

Myeloproliferative Neoplasms (MPN) are a group of diseases that are caused by an overproduction of one or more blood cell types (red cells, white cells or platelets) in the bone marrow. Myeloproliferative neoplasms (MPNs) are associated with dysregulation of tyrosine kinases, leading to abnormal downstream signaling pathways and increased cellular proliferation. Based on the presence or absence of the “Philadelphia Chromosome” (BCR-ABL1 translocation), MPNs are broadly grouped into two categories – Ph+ (Chronic Myeloid Leukemia) and Ph- (Polycythemia Vera (PV), Essential Thrombocythemia (ET) and Myelofibrosis (MF) MPNs. Mutations in one of four genes—JAK2, MPL, CALR, and CSF3R — can be found in the vast majority of patients with MPN and represent driver mutations that can induce the MPN phenotype. Recent evidences show that the identification of new MPN biomarkers contributes to a better understanding of the molecular basis of the disease and these markers are significantly useful in screening, diagnosis, prognosis and monitoring of MPN, as well as the possibility of predicting each individual’s response to treatment.

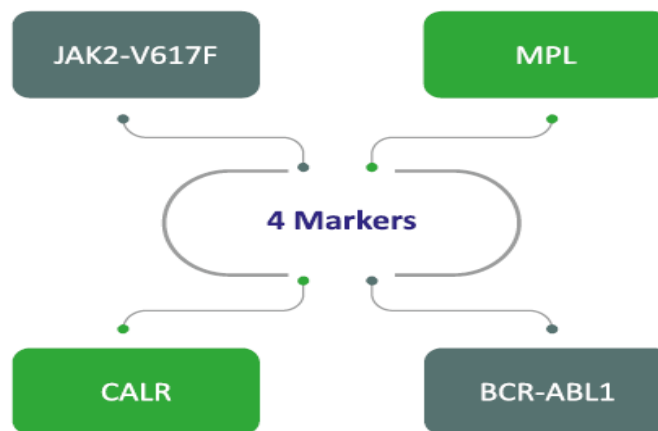
### SOLUTION BY TRUPCR®

TRUPCR® provides solution for detection of most relevant molecular biomarkers associated with acute lymphoblastic leukemia and discusses their clinical importance in terms of risk prediction, diagnosis and prognosis.

The TRUPCR® MPN Panel Kit is intended for the qualitative detection of diagnostic and prognostic markers of Myeloproliferative Neoplasms in peripheral blood or bone marrow samples using Real-Time PCR system. The DNA and RNA both should be extracted from the samples and then RNA should be converted to cDNA using components provided in the kit. TRUPCR® MPN Panel Kit requires cDNA as template for BCR-ABL1 and DNA for detection of DNA based mutations.

TRUPCR® MPN Panel Kit is a Real time PCR assay which is based on fluorescent signal generated from the presence of an oligonucleotide probe specific for target DNA sequence. The kit includes complete cDNA chemistry for RNA based transcripts.

### MARKERS



### PRODUCT HIGHLIGHTS:

- Sample Type – EDTA Blood / Bone Marrow
- All Inclusive Kit as all reagents for cDNA chemistry, PCR and real-time PCR are included
- The kit offers sensitivity to detect up to 10 copies of fusion transcripts BCR-ABL1 and up to 1% mutant allele in background of 99% wild type allele for JAK 2, CALR and MPL genes
- Compatible Instruments – Applied Biosystems™ 7500 series / StepOne series / QuantStudio® series, Rotor-Gene Q, Bio-Rad CFX96, CFX384, AriaMx Real-Time PCR, Roche - LightCycler® 480 – II, Line gene K Real-Time PCR

**Mutation Variants detected by TRUPCR<sup>®</sup> MPN Panel Kit**

Gene	Variant
BCR-ABL1	e13a2 & e14a2 (p210)
CALR	e1a2 (p190)
	Type-1 (L367fs*46)
	Type-2 (K385fs*47)
MPL	W515L
	W515K
	W515A
	S505N
JAK2	JAK2 V617F

**ORDERING INFORMATION**

Cat. No.	Description	Size
3B1303	TRUPCR <sup>®</sup> MPN Panel Kit	24 Reactions
3B1304	TRUPCR <sup>®</sup> MPN Panel Kit	48 Reactions

