

Client: Example Client ABC123  
123 Test Drive  
Salt Lake City, UT 84108  
UNITED STATES

Physician: Doctor, Example

**Patient: Patient, Example**

**DOB:** 12/31/1752  
**Gender:** Unknown  
**Patient Identifiers:** 01234567890ABCD, 012345  
**Visit Number (FIN):** 01234567890ABCD  
**Collection Date:** 01/01/2017 12:34

**JAK2 Gene, V617F Mutation, Qualitative with Reflex to JAK2 Exon 12 Mutation Analysis by PCR**

ARUP test code 2012085

JAK2 Gene, V617F Mutation, Qualitative

Not Detected

There is no evidence of the JAK2 V617F point mutation by PCR analysis. This result does not entirely exclude the possibility of a JAK2 V617F mutation below the test limit of detection.

JAK2 Exon 12 testing will be performed.

**INTERPRETIVE INFORMATION: JAK2 (V617F) Mutation by PCR**

Patient DNA is isolated and subjected to allele-specific PCR amplification. The reaction uses an oligonucleotide primer set specific for the exon 14 of JAK2 on chromosome 9, and an allele-specific primer that specifically initiates amplification from the allele containing the point mutation in codon 617. Each assay includes a positive control reaction using DNA from the cell-line HEL with a known JAK2 (V617F) codon mutation and a negative control using DNA from placental DNA.

The JAK2 gene sequences are present in the normal human genome and serve as a control for PCR in the assay.

PCR products are analyzed by electrophoresis and UV transillumination of ethidium bromide stained gels.

Results of this test must always be interpreted in the context of morphologic and other relevant data, and should not be used alone for a diagnosis of malignancy.

The limit of detection for this assay is 2 percent mutated alleles.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

**JAK2 Exon 12 Mutation Analysis by PCR**

ARUP test code 2002357

JAK2 Exon 12 Mutation Analysis by PCR

Not Detected

**H=High, L=Low, \*=Abnormal, C=Critical**

Unless otherwise indicated, testing performed at:

**ARUP LABORATORIES | 800-522-2787 | aruplab.com**  
500 Chipeta Way, Salt Lake City, UT 84108-1221  
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 20-118-107295  
Patient Identifiers: 01234567890ABCD, 012345  
Visit Number (FIN): 01234567890ABCD  
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4848

There is no evidence of a JAK2 Exon 12 mutation. This result does not entirely exclude the possibility of a JAK2 Exon 12 mutation below the test limit of detection or one which is not detectable by the assay specific design.

**INTERPRETIVE INFORMATION: JAK2 Exon 12 Mutation Analysis by PCR**

Patient leukocyte genomic DNA is isolated and subjected to PCR amplification in the presence of a short blocking oligonucleotide homologous to exon 12 (codons 537-544) of the wild-type JAK2 gene. The oligonucleotide is designed to specifically suppress PCR amplification of wild-type JAK2 exon 12 sequence. In contrast, JAK2 exon 12 mutations located between codons 537-544 disrupt proper binding of the blocking oligonucleotide during PCR amplification resulting in a product of approximately 225 base-pairs. Each assay includes control DNA from mutation positive and wild-type negative samples; all samples are tested in paired reactions with and without blocking oligonucleotide. A PCR product formed in the presence of blocking oligonucleotide indicates the presence of a mutation.

Results of this test must always be interpreted in the context of clinical and other relevant laboratory data such as erythropoietin level, exclusion of other causes of elevated hemoglobin, and should not be used alone for a diagnosis of polycythemia vera which is a form of malignancy, i.e., myeloproliferative disorder.

This test is expected to detect 1 out of 1000 normal cells harboring a JAK2 exon 12 mutation.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement B: aruplab.com/CS

**VERIFIED/REPORTED DATES**

Procedure	Accession	Collected	Received	Verified/Reported
JAK2 Gene, V617F Mutation, Qualitative	20-118-107295	4/27/2020 12:12:00 PM	4/27/2020 12:12:17 PM	4/27/2020 12:19:00 PM
JAK2 Exon 12 Mutation Analysis by PCR	20-118-107295	4/27/2020 12:12:00 PM	4/27/2020 12:12:00 PM	4/27/2020 12:22:00 PM

END OF CHART

**H=High, L=Low, \*=Abnormal, C=Critical**

Unless otherwise indicated, testing performed at:

**ARUP LABORATORIES | 800-522-2787 | aruplab.com**  
500 Chipeta Way, Salt Lake City, UT 84108-1221  
Tracy I. George, MD, Laboratory Director

Patient: Patient, Example  
ARUP Accession: 20-118-107295  
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Visit Number (FIN): 01234567890ABCD  
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