

# UGT1A1

## Real Time (FRET)



The UGT1A1 gene encodes UDP-glucuronosyltransferase 1A1, an enzyme involved in the metabolism of sterorides, bilirubin, hormones and drugs. Mutations in the promoter of this gene result in reduced activity enzymatic and are associated with severe gastrointestinal and haematological toxicities following administration of **irinotecan**, a drug used in the treatment of some solid tumors. A reduction in enzyme activity it is also the cause of an altered metabolism of bilirubin, associated with Gilbert's syndrome.

The **UGT1A1 Real Time** kit provides the necessary material for **the detection of alleles \*1 (wt), \*28, \*36, \*37**, characterized by an altered number of repetitions of the TA di-nucleotide in the TATA box of the gene promoter with respect to the allele wt.

In particular, the search for the allele \*28 is indicated in "Recommendation for pharmacogenetic analyzes" issued by **AIOM -SIF** in 2019 in order to identify the optimal dosage of Irinotecan, reducing the risk of toxicity.

Genotype UGT1A1	Alleles	N° repetitions TA	Recommended dose of irinotecan
Wild Type	*1/*1	6/6	100%
Heterozygous	*1/*28	6/7	100%
Mutated	*28/*28	7/7	70%



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<b>Technology</b>	PCR Real Time - Melt curve analysis
<b>Strating material</b>	Blood (EDTA o citrate)
<b>Traget regions</b>	4 allelic variants of the UGT1A1 gene: *36, *1 (wt), *28 e *37
<b>Composition of the kit</b>	<b>1 mix ready-to-use</b> for detection and discrimination of the 4 allelic variants
<b>Controls</b>	Optional:10 set of controls ready-to-use Each set contains: <ul style="list-style-type: none"><li>• 1 <b>heterozygous</b> control *1/*28</li><li>• 1 <b>heterozygous</b> control *36/*37</li></ul>
<b>Extraction Nucleaic Acid</b>	<b>AUTOMATIC:</b> <b>OMNIA LH 75</b> Extraction DNA from blood, code NLM AA1319/48 <b>MANUAL:</b> <b>EXTRACTION DNA from column</b> , cod. NLM AA1001 Compatibility with equivalent extraction methods
<b>Real-Time compatible instrument</b>	CFX Real Time PCR (BioRad)
<b>Software of Analysis</b>	Software Real-PHARMA (cod. NLM DO041)
<b>Automatic System</b>	<b>OMNIA LH 75 + CFX 96 + Software Real-PHARMA</b> Extractione PCR Setup continuously (OMNIA LH 75) Complete traceability Bidirectional interfacing (LIS)
<b>CE-IVD</b>	YES

## Information for ordering UGT1A1 Real Time

Name	Code	Format
UGT1A1 Real Time (FRET)	AA1628/24A	24 tests
Heterozygous Controls UGT1A1	FA165/10	10 controls



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