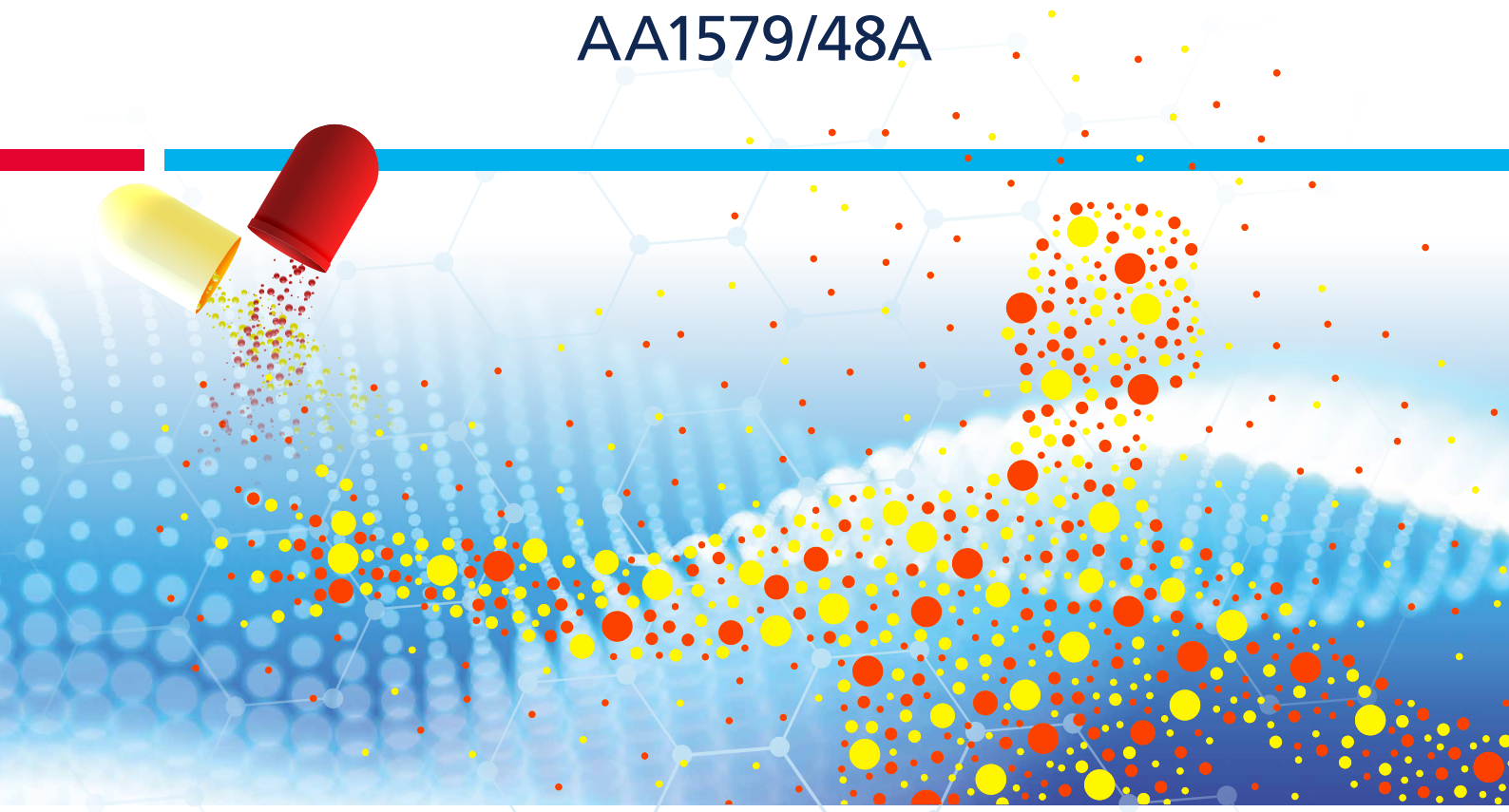


# DPYD Real Time (FRET)

## AA1579/48A



Dihydropyrimidine dehydrogenase (DPD) is an enzyme encoded by the DPYD gene and involved in the metabolism of **fluoropyrimidines**, chemotherapeutic agents used in the therapy of some solid tumors. These drugs can cause serious gastrointestinal and haematological toxicities due to the presence of some mutations of the DPYD gene, which determine a reduced activity of the encoded enzyme.

The investigation of these mutations, performed before starting the treatment, supports the clinician in defining the optimal dosage of the drug, reducing the risk of toxicity.

The **DPYD Real Time** kit provides the necessary material for **the analysis of 5 mutations of the DPYD** gene, the presence of which is associated with clinically relevant adverse reactions to fluoropyrimidine therapy, in accordance with the "Recommendation for pharmacogenetic analyzes" issued by **AIOM -SIF** in 2019.

HGVS	SNP	Allel	Effect
c.1905+1G>A	rs3918290	DPYD*2A	IVS14+1G>A
c.1679T>G	rs55886062	DPYD*13	p.I560S
c.2846A>T	rs67376798		p.D949V
c.1129-5923C>G <sup>^</sup>	rs75017182		IVS-10 C>G
c.2194G>A*	rs1801160	DPYD*6	p.V732I

<sup>^</sup> Variant c.1129-5923C>G is in perfect linkage disequilibrium with c.1236G>A (rs56038477) \* only for toxicity DURING treatment



# DPYD Real Time (FRET)

<b>Technology</b>	PCR Real Time - Melt curve analysis
<b>Starting material</b>	Blood (EDTA or citrate)
<b>Target</b>	<b>5 mutations of gene DPYD:</b> c.1905+1G>A, c.1679T>G, c.2846A>T, c.1129-5923C>G, c.2194G>A
<b>Kit composition</b>	<b>5 mix ready-to-use</b> specific to each mutation Including amplification enzyme and UNG
<b>Controls</b>	Optional: <b>DPYD heterozygote control</b> 10 controls ready-to-use, heterozygotes for all 5 investigated mutations
<b>Nucleic Acid Extraction</b>	<b>AUTOMATED:</b> <b>OMNIA LH 75</b> Viral DNA/RNA Extraction, code NLM AA1319/48 <b>MANUAL:</b> <b>DNA Manual Extraction</b> , code NLM AA1001 Compatibility with the most common extractions
<b>Real-Time instrument</b>	CFX Real Time PCR (BioRad)
<b>Software</b>	Software Real Gene (cod. NLM DO022)
<b>Automated System</b>	<b>OMNIA LH 75 + CFX 96 + Software Real Gene</b> Continuous Extraction and PCR Setup (OMNIA LH 75) Complete traceability Bidirectional interfacing (LIS)
<b>CE-IVD</b>	Yes

## Ordering information

Nome	Code	Kit size
DPYD Real Time (FRET)	AA1579/48A	48 test
DPYD control heterozygous	FA157/10	10 controls



### NUCLEAR LASER MEDICINE S.R.L.

Viale delle Industrie, 3  
20049 Settala (Milano) - ITALIA  
TEL. 02 952451 - FAX 02 95245237.8  
segreteria@nlm.it  
[www.nlm.it](http://www.nlm.it)