



Assay Technologies Ltd.



APIS DPYD qPCR Kit

The APIS DPYD qPCR Kit is designed for fast and efficient detection of all seven Tier 1 *DPYD* alleles recommended for testing by AMP PGx Working Group¹. Each reaction identifies both wildtype (WT) and variant alleles, directly from blood or extracted genomic DNA (gDNA). The kit's rapid turnaround time, cost-effectiveness, and easy integration into existing qPCR workflows, makes it a perfect solution for both centralised and decentralised laboratories.

Advantages of the APIS DPYD qPCR Kit



Wide target coverage – detects all seven AMP Tier 1 *DPYD* variants



Direct workflow – compatible with both 1% EDTA Whole Blood and gDNA



Reliable HapB3 detection – targets key functional HapB3 variant



Accessible – compatible with most qPCR instruments

Analytical Sensitivity

The analytical sensitivity of the kit was evaluated by testing homozygous (wildtype) and heterozygous samples and defined as the minimum amount of DNA necessary to correctly genotype 95% of the samples. The APIS DPYD qPCR Kit can detect seven key *DPYD* variants in as little as 0.11ng gDNA.

Table 1: *DPYD* variants and analytical sensitivity of the APIS DPYD qPCR Kit

Variant (NM_000110.4)	rsID	Sensitivity (ng per reaction)
c.1905+1G>A	rs3918290	0.11
c.1679T>G	rs55886062	0.04
c.1129-5923C>G	rs75017182	0.11
c.557A>G	rs115232898	0.04
c.2846A>T	rs67376798	0.04
c.868A>G	rs146356975	0.04
c.2279C>T	rs112766203	0.04

¹ AMP DPYD Genotyping Recommendations

APIS DPYD qPCR Kit shows excellent concordance with alternative genotyping methods

gDNA extracted from 29 specimens with known *DPYD* variant status (characterised via NGS, microarrays or qPCR) and one synthetic DNA sample were assessed with the APIS DPYD qPCR Kit.

Table 2: Concordance of the APIS DPYD qPCR Kit with other methods

Variant (NM_000110.4)	N° Homozygous WT specimens	N° Heterozygous specimens	N° Homozygous Variant specimens	N° of correctly genotyped specimens
c.1905+1G>A	24	4	2	30/30
c.1679T>G	27	2	1	30/30
c.1129-5923C>G	23	5	2	30/30
c.557A>G	24	5	1	30/30
c.2846A>T	24	5	1	30/30
c.868A>G	26	3	1	30/30
c.2279C>T	24	5	1	30/30

APIS DPYD qPCR Kit Specifications

The kit has undergone testing as part of APIS unique RUO assay development pipeline, including both *in silico* and wet laboratory testing. As a result, researchers can depend on the kit for consistent and high-quality detection of *DPYD* variants. A positive and negative control (PC and NTC), which monitor assay set up and assay performance, are also supplied with the kit.

Format	11 Tubes: 7 PP mixes (Primer-Probes), 2 Enzyme mixes, 1 Positive Control, 1 Negative Control
PCR Method	qPCR
Turnaround Time	< 2 hours per PCR plate
Hands-on Time	< 1 hours per PCR plate
Intended Sample Type	Extracted gDNA (e.g. from whole blood) or 1% EDTA whole blood
Instrument	qPCR instrument
Shelf Life	12 months stored at -30°C to -15°C

APIS DPYD qPCR Kit Ordering Information

Assay Name	Test Type	Kit Size	Catalogue Number	Price
APIS DPYD qPCR Kit	RUO	24 samples plus controls	03501	Available upon request

All scientific and analytical information in this brochure comes from the APIS DPYD qPCR Kit Handbook ART0180.

The APIS DPYD qPCR Kit is intended for Research Use Only (RUO). Not for use in diagnostic procedures.