

# The dry qPCR revolution against cancer



# diatech pharmacogenetics

Democratising molecular oncology to accelerate personalised therapy

SPAX®

# **EasyPGX**<sup>®</sup>: the dry qPCR revolution against cancer

### Improve your diagnostic routine to accelerate personalized medicine in oncology

**EasyPGX**<sup>®</sup> is the complete RT-qPCR in vitro diagnostic solution with the most comprehensive portfolio of assays for molecular oncology.

With its revolutionary ready-to-use, dry-format, pre-aliquoted, 8-well reaction strips, **EasyPGX**<sup>®</sup> is suited to use in any laboratory setting, assuring rapid, high-performance, standardised results with easy handling.





### Focus on what really matters to patients

The number of biomarkers used in oncology grows constantly, generating a mass of complex information regarding the genetic make-up of each cancer patient. Focusing on providing timely, clinically-relevant biomarkers results is crucial to supporting physicians in the clinical decision-making process, allowing them to identify and initiate the best treatment for each patient as soon as possible.

### ESCAT Tier I molecular biomarkers



### (NSCLC) EGFR ex19del, L858R EGFR T790M

Uncommon EGFR mutations BRAF V600E ALK fusions and mutations ROS1 fusions and mutations RFT fusions MET ex14 skipping mutations NTRK fusions KRAS G12C EGFR exon 20 insertions

### Breast Cancer<sup>1</sup> (BC)

**ERBB2** amplifications BRCA1/2 germline mutations **PIK3CA** mutations MSI-H NTRK fusions



### Colorectal Cancer<sup>1</sup> (CRC) **BRAF V600E**

MSI-H NTRK fusions

### Prostate Cancer<sup>1</sup> (PC)

BRCA1/2 somatic mutations MSI-H

Gastric Cancer<sup>1</sup> (GC)







Hepatocellular Carcinoma<sup>1</sup> (HCC) MSI-H NTRK fusions



Cholangiocarcinoma<sup>1</sup> (CCA) IDH1 mutations FGFR2 fusions MSI-H NTRK fusions

Carcinoma<sup>3</sup> (HNSCC)

**HRAS** mutations NTRK fusions

MSI-H

Head and Neck Squamous Cell



Thyroid Cancer<sup>4</sup> (TC) RET fusions and mutations NTRK fusions **BRAF** mutations

ESCAT Hypothetical target

**ESCAT** Hypothetical target

ESCAT

evidence tier I

Ready for routine use

ESCAT evidence tier V **Combination development** 

**ESCAT** 

evidence tier II

Investigational

<sup>1</sup>Mosele F et al. Recommendations for the use of next-generation sequencing (NGS) for patients with metastatic cancers: a report from the ESMO Precision Medicine Working Group. Ann Oncol. 2020 Nov;31(11):1491-1505.

<sup>2</sup>Hendriks LE et al. Oncogene-addicted metastatic non-small-cell lung cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up. Ann Oncol 2023 (in press).

<sup>3</sup>Marret G et al. Genomic Alterations in Head and Neck Squamous Cell Carcinoma: Level of Evidence According to ESMO Scale for Clinical Actionability of Molecular Targets (ESCAT). JCO Precis Oncol. 2021 Nov;5:215-226.

<sup>4</sup>Filetti S et al. ESMO Clinical Practice Guideline update on the use of systemic therapy in advanced thyroid cancer. Ann Oncol. 2022 Jul;33(7):674-684.

ESCAT evidence tier X Lack of evidence

## EasyPGX®, the RT-PCR system developed with patients in mind

With a sample-to-result time of under 3 hours, **EasyPGX**<sup>®</sup> is the best in class RT-PCR solution for accelerating patient care, helping oncologists everywhere make rapid treatment decisions.



The **EasyPGX**<sup>®</sup> assay portfolio focuses on the main clinically-relevant routine biomarkers for the most common solid tumours in accordance with the ESMO scale for clinical actionability of molecular targets (ESCAT) Tier I and main international guidelines.





## Join the personalized oncology revolution with EasyPGX<sup>®</sup> System









## EasyPGX®: the most comprehensive qPCR IVD biomarker portfolio for precision oncology

EASYPGX <sup>®</sup> READY KRAS cat. no. RT021 (48 test)		
Mutation	22	Detection of the most common mutations in exon 2 (codons 12, 13), exon 3 (codons 59, 61) and exon 4 (codons 117, 146) of the KRAS
Codons	12, 13, 59, 61, 117, 146	gene. Each mix allows the co-amplification of one or more mutated alleles plus an endogenous control gene.
Cancer Types		Colorectal Cancer, NSCLC, Thyroid Cancer.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and plasma.

EASYPGX® READY BRAF cat. no. RT022 (48 test)		
Mutation	5	Detection of the most common mutations in codon 600 of the BRAF gene. Each mix allows the co-amplification of one or more mutated
Codons	600	alleles plus an endogenous control gene.
Cancer Types		Colorectal Cancer, NSCLC, Melanoma, Thyroid Cancer.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and plasma.

EASYPGX® READ	EASYPGX® READY EGFR cat. no. RT023 (48 test)	
Mutation	86	Detection of the most common mutations in exons 18, 19, 20, 21 of the EGFR gene. Each mix allows the co-amplification of one or more
Exons	18, 19, 20, 21	mutated alleles plus an endogenous control gene.
Cancer Types	CLD	NSCLC.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and plasma.

EASYPGX® NRAS	EASYPGX® NRAS cat. no. RT024 (48 test)	
Mutation	20	Detection of the most common mutations in exon 2 (codons 12, 13), exon 3 (codons 59, 61) and exon 4 (codons 117, 146) of the NRAS
Codons	12, 13, 59, 61, 117, 146	gene. Each mix allows the co-amplification of one or more mutated alleles plus an endogenous control gene.
Cancer Types		Colorectal Cancer, Thyroid Cancer.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and plasma.

EASYPGX® READ	EASYPGX <sup>®</sup> READY ALK, ROS1, RET MET cat. no. RT025 (48 test)	
Fusions	<b>23</b> ALK, ROS1, RET & MET exon 14 skipping	Detection of the most common chromosomal translocations involving ALK, ROS1, RET and MET exon 14 skipping, and ALK gene 5'/3' portion expression imbalances. Each mix allows the co-amplification of one or more fusions plus an endogenous control gene.
Cancer Types	CD 12	NSCLC, Thyroid Cancer.
Starting Material		RNA from formalin-fixed paraffin-embedded (FFPE) tissues and cytological samples.

EASYPGX <sup>®</sup> READ	EASYPGX® READY DPYD cat. no. RT026 (48 test)	
Polymorphisms	<b>5</b> DPYD*2A, DPYD*13, DPYD D949V, DPYD IVS10, DPYD*6	Detection, by allelic discrimination, of the DPYD gene polymorphisms DPYD*2A (IVS14+1G>A, c.1905+1G>A), DPYD*13 (c.1679T>G), DPYD D949V (c.2846A>T) and DPYD IVS10 (c.1129–5923C>G), DPYD*6 (V732I, c. 2194G>A) associated with fluoropyrimidine-induced toxicity. Each mix allows the co-amplification of the mutant sequence as well as the wild-type sequence.
Assay Type	The second se	Drug induced toxicity genotyping assay.
Starting Material		DNA from whole blood.

EASYPGX® READ	EASYPGX® READY UGT1A1 cat. no. RT027 (48 test)	
Polymorphisms	<b>5</b> UGT1A1*1, UGT1A1*6, UGT1A1*28, UGT1A1*36, UGT1A1*37	Detection, by allelic discrimination, of the UGT1A1 gene polymorphisms UGT1A1*36 (TA)5, UGT1A1*1 (TA)6, UGT1A1*6 (c. 211G > A), UGT1A1*28 (TA)7 and UGT1A1*37 (TA)8 associated with irinotecan-induced toxicity. Each mix allows the co-amplification of the mutant sequence as well as the wild-type sequence.
Assay Type	50 C	Drug induced toxicity genotyping assay.
Starting Material		DNA from whole blood.

EASYPGX® READ	EASYPGX® READY THYROID cat. no. RT028 (48 test)		
Mutation	37	Detection of the most common mutations in exon 2 (codons 12,13) and exon 3 (codon 61) of the KRAS, NRAS, HRAS genes and codons 600	
Codons	RAS 12, 13, 61 BRAF 600, 601	and 601 of the BRAF gene. Each mix allows the co-amplification of one or more mutated alleles plus an endogenous control gene.	
Cancer Types	Jac Alexandree	Thyroid Cancer.	
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and cytological samples.	



EASYPGX® READ	EASYPGX <sup>®</sup> READY EGFR PLUS cat. no. RT030 (48 test)	
Mutation	3	Detection of T790M and C797S (c.2389 T>A, c.2390 G>C) mutations of the EGFR gene. Each mix allows the co-amplification of one or more
Codons	797, 790	mutated alleles plus an endogenous control gene.
Cancer Types	CD	NSCLC.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and plasma.

EASYPGX <sup>®</sup> READ	EASYPGX® READY IDH1-2 cat. no. RT031 (48 test)	
Mutation	19	Detection of the most common mutations of the IDH1 gene (codons 105 and 132) and IDH2 gene (codons 140 and 172). Each mix
Codons	105, 132, 140, 172	allows the co-amplification of one or more mutated alleles plus an endogenous control gene.
Cancer Types		Glioma, Cholangiocarcinoma.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues, peripheral whole blood and bone marrow.

EASYPGX <sup>®</sup> READY	EASYPGX® READY THYROID FUSION cat. no. RT032 (48 test)		
Fusions	7 RET, PPARG	Detection of the chromosomal translocations involving RET/PTC1: CCDC6-RET; RET/PTC2: PRKAR1A-RET; RET/PTC3: NCOA4-RET and PAX8/PPARG. Each mix allows the co-amplification of one or more fusions plus an endogenous control gene.	
Cancer Types	X	Thyroid Cancer.	
Starting Material		RNA from formalin-fixed paraffin-embedded (FFPE) tissues and cytology samples.	

EASYPGX® READ	EASYPGX® READY MSI cat. no. RT033 (48 test)	
MSI biomarkers	<b>8</b> BAT-25, BAT-26, NR-21, NR-22, NR-24, NR-27, CAT-25, MONO-27	Detection of 8 "quasi-monomorphic" mononucleotide markers: BAT-25, BAT-26, NR-21, NR-22, NR-24, NR-27, CAT-25 and MONO-27 by RT-PCR and subsequent analysis of the targets based on the denaturation profile. The test allows fast and accurate detection of microsatellite instability in tumour samples.
Cancer Types		Agnostic biomarker.
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissue. Comparison with normal tissue or blood is not required for result analysis.

EASYPGX <sup>®</sup> READY HPV cat. no. RT034 (48 test)					
Genotypes	<b>14</b> 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 68	Identification of 14 high-risk genotypes (16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66 and 68) of Human Papilloma Virus (HPV) by amplifying the E6 and E7 oncogenes. Each mix allows the co- amplification of the genotype-specific HPV targets plus an endogenous control gene.			
Cancer Types		Cervical Cancer, Head and Neck Cancer.			
Starting Material		DNA from cervical swabs and formalin-fixed paraffin-embedded (FFPE) tissue.			

EASYPGX® READY NTRK FUSION cat. no. RT035 (48 test)					
Fusions	32	Detection of the main fusion variants of the NTRK1, NTRK2 and NTRK3 genes. Each mix allows the co-amplification of one or more			
	NTRK1, NTRK2, NTRK3	fusions plus an endogenous control gene.			
Cancer Types		Agnostic biomarker.			
Starting Material		RNA from formalin-fixed paraffin-embedded (FFPE) tissues and cytology samples.			

EASYPGX® READY PIK3CA cat. no. RT036 (48 test)					
Mutation	24	Detection of the most common mutations in codon 345, 420, 542, 545, 546, 1047 and 1049 of the PIK3CA gene.			
Codons	345, 420, 542, 545, 546, 1047, 1049	Each mix allows the co-amplification of one or more mutated alleles plus an endogenous control gene.			
Cancer Types		Colorectal Cancer, Breast Cancer.			
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues and plasma.			

EASYPGX <sup>®</sup> READY MGMT cat. no. RTX049 (48 test)					
CpG sites	12	Qualitative detection, by RT-PCR and subsequent analysis of the targets based on the denaturation profile, of the methylation status of 12 CpG sites located in the promoter of the MGMT gene. The kit includes			
	MGMT promoter	reagents for sodium bisulfite treatment of DNA extracted before methylation analysis, which converts unmethylated cytosines to uracil.			
Cancer Types		Glioma.			
Starting Material		DNA from formalin-fixed paraffin-embedded (FFPE) tissues.			



## EasyPGX® Analysis Software: streamline your data analysis process

EasyPGX Analysis Software is the dedicated automated data analysis solution for use with EasyPGX® ready-to-use kits.

- Complies with the regulation (EU) 2017/746 [IVDR]
- Complete automated data analysis with a turnaround time of under 5 minutes
- No cloud or external data sharing required
- Fully-automated data analysis interpretation and raw data checking in a single software solution
- · Automated variant calling and results interpretation
- LIMS connectivity
- Data export and reporting in various common file formats





Automated variant calling and raw data checking in a single software solution.



# System information





Non-Small Cell

Lung Cancer

N

Thyroid

Cancer

Colorectal

Cancer

# EasyPGX®, the most extensive IVDcompliant range of solid and blood cancer biomarkers

			(PG)		
Blood	RT031	EasyPGX <sup>®</sup> ready IDH1-2			
cancer	RT038	EasyPGX <sup>®</sup> ready BCR-ABL Fusion			
	RT039	EasyPGX <sup>®</sup> ready BCR-ABL p210			
	RT040	EasyPGX <sup>®</sup> ready BCR-ABL p190			
	RT042	EasyPGX <sup>®</sup> ready PML-RARA Fusion			
	RT043	EasyPGX <sup>®</sup> ready AML1-ETO Fusion			
	RT044	EasyPGX <sup>®</sup> ready CBFB-MYH11 Fusion			
	RT046	EasyPGX <sup>®</sup> ready WT1 Quant			
Solid	RT021	EasyPGX <sup>®</sup> ready KRAS	•	•	•
tumor	RT022	EasyPGX <sup>®</sup> ready BRAF	•	•	•
	RT023	EasyPGX <sup>®</sup> ready EGFR		•	
	RT024	EasyPGX <sup>®</sup> ready NRAS	•		•
	RT025	EasyPGX <sup>®</sup> ready ALK ROS1 RET MET		•	•
	RT026	EasyPGX <sup>®</sup> ready DPYD	•		
	RT027	EasyPGX <sup>®</sup> ready UGT1A1	•		
(\$	RT028	EasyPGX <sup>®</sup> ready Thyroid			•
8	RT030	EasyPGX <sup>®</sup> ready EGFR PLUS		•	
	RT031	EasyPGX <sup>®</sup> ready IDH1-2			
	RT032	EasyPGX <sup>®</sup> ready Thyroid Fusion			•
	RT033	EasyPGX <sup>®</sup> ready MSI			
	RT034	EasyPGX <sup>®</sup> ready HPV			
	RT035	EasyPGX <sup>®</sup> ready NTRK Fusion			
	RT036	EasyPGX <sup>®</sup> ready PIK3CA	•		
	RTX049	EasyPGX <sup>®</sup> ready MGMT			

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Cutaneous or Malignant Melanoma	Cholangiocar- cinoma	Breast Cancer	Cervical Cancer	Glioma	Head and Neck Cancer	Leukaemia	Agnostic Biomarker	Liquid Biopsy Assays
5.3	<b>K</b>		Y					
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For information please contact:

# diatech pharmacogenetics

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For In Vitro diagnostic use compliant with the current EU IVDR regulation (2017/746) in Europe. EasyPGX<sup>®</sup> solution is available for sale in EU and many other countries. Please check availability and regulatory status with the local Diatech Pharmacogenetics representative. The registered names, trademarks and know-how indicated in this brochure are to be understood as protected by law, even when not explicitly stated.