Molecular Pathology

NGS - *FGFR* Panel

ZYTOMED® SYSTEMS | a ZYTOMICS company

AmoyDx® *FGFR1-4* NGS Panel

Detection of mutations and fusions in the *FGFR1, FGFR2, FGFR3* and *FGFR4* genes

The AmoyDx® *FGFR1-4* NGS Panel is a Next-Generation Sequencing-based assay for the comprehensive analysis of the *FGFR1-4* genes in FFPE tissue [1, 2]. In a combined DNA/RNA workflow, mutations (SNVs, InDels) are detected on genomic DNA, fusions are analyzed at RNA level, as recommended in several publications [3]. The assay design allows for the identification of unknown fusion partners. As with all AmoyDx® NGS panels, the sequence data is analyzed locally using the AmoyDx® NGS Data Analysis System (ANDAS).

Specifications of the AmoyDx® *FGFR1-4* NGS Panel

Regulatory status	RUO
Number of genes/target regions detected	4 (*FGFR1-4*), complete coding regions
Genomic coverage	approx. 10 kb
Validated sequencing platforms	Illumina NextSeq®* 500/550
Sample material	DNA and RNA from FFPE tissue
Amount of DNA/RNA required per sample	DNA: 100 ng RNA: 20 - 200 ng (100 ng recommended)
Parameters/variants detected	SNVs & InDels on DNA-level; Fusions on RNA-level
Sensitivity	5 % allele frequency
Data output per sample	0.3 Gb
Working days for library preparation	2
Technology	Hybrid Capture (ddCAP) with DNA/cDNA co-library preparation
Data analysis	Local workstation with AmoyDx® analysis software (ANDAS)

* NextSeq® is a registered trademark of Illumina, Inc., 92122, San Diego, US

Advantages of the AmoyDx® *FGFR1-4* NGS Panel

- Comprehensive analysis of *FGFR* genes with a tailored NGS panel
- *FGFR* fusion detection at RNA-level
- Unique DNA/cDNA co-library preparation workflow (one-tube system)
- Detection of unknown fusion partners
- Use of UID (Unique IDentifier) sequences to identify PCR errors during data analysis
- Requires a comparatively low sequencing and data storage capacity
- High data security when analyzing on the ANDAS workstation as an independent local stand-alone system

Genes and Target Regions of the AmoyDx® *FGFR1-4* NGS Panel

Gene	Target Regions
FGFR1	NM_023110: Exon 2 – Exon 18 (complete coding sequence)
FGFR2	NM_000141: Exon 2 – Exon 18 (complete coding sequence)
FGFR3	NM_000142: Exon 2 – Exon 18 (complete coding sequence)
FGFR4	NM_213647: Exon 2 – Exon 18 (complete coding sequence)

This product is for research use only (RUO).

You will find our corresponding product portfolio on the back page

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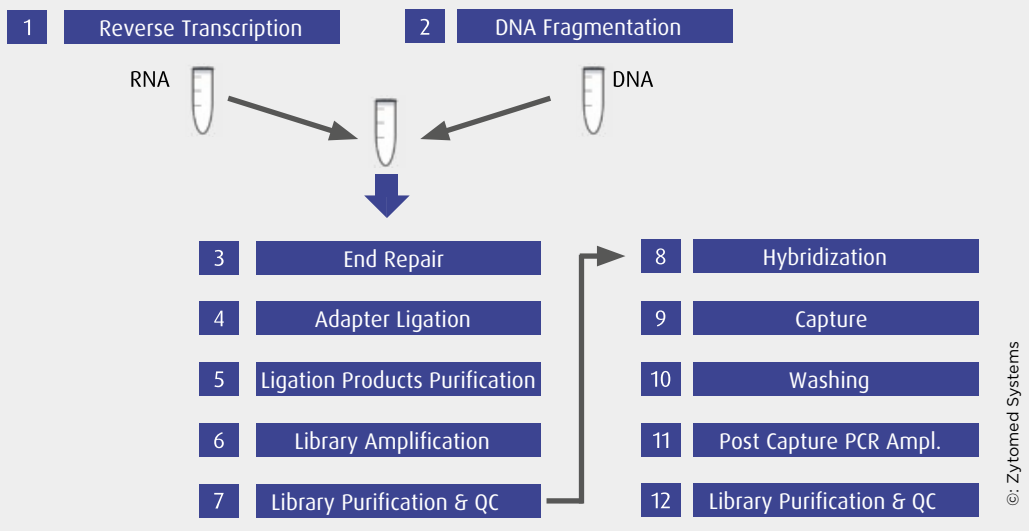
ddCAP-Technology and DNA/cDNA Co-Library Preparation

Library preparation with the AmoyDx® *FGFR1-4* NGS Panel is based on the ddCAP (dual directional Capture) technology optimized for DNA and RNA. The procedure takes approximately two working days and runs in one reaction tube per sample from the end repair step onwards. This simplifies processing and minimizes the risk of sample mix-ups.



Literature

[1] Qing *et al.* Identification of Fibroblast Growth Factor Receptors (FGFRs) Alterations (alts) at DNA and RNA-level by One-Step Next-Generation Sequencing. Poster at AACR; April 7, 2024

[2] Zhu Z *et al.*Targeted genomic profiling revealed a unique clinical phenotype in intrahepatic cholangiocarcinoma with fibroblast growth factor receptor rearrangement. Transl Oncol. 14:101168, 2021

[3] Lamarca, A. *et al.* Futibatinib: second EMA approval for FGFR inhibitor in cholangiocarcinoma ESMO Open, Volume 8, Issue 6, 102049, 2023

Product Information

Description	Technology	Quantity	Status	Order no.
AmoyDx® *FGFR1-4* NGS Panel Detection of mutations (SNVs, InDels) and fusions in genes *FGFR1, FGFR2, FGFR3* and *FGFR4* on DNA and RNA from FFPE tissue	ddCAP	1 Kit (24 Tests)	RUO	ADX-NFP08-R

Further AmoyDx® NGS Assays

Description	Technology	Quantity	Status	Order no.
AmoyDx® Myeloid Blood Cancer Panel Detection of SNVs, InDels and fusions in 55 genes on DNA and RNA from bone marrow aspirate specimens	HANDLE	1 Kit (24 Tests)	RUO	ADX-MBCP06-R
AmoyDx® HANDLE Melanoma NGS Panel Detection of mutations (SNVs, InDels) in 9 melanoma key genes on DNA from FFPE tissue	HANDLE	1 Kit (24 Tests)	RUO	ADX-HCUS-01-R
AmoyDx® Comprehensive Panel Detection of SNVs, InDels and fusions in 110 genes on DNA from liquid biopsies and FFPE tissue plus determination of the MSI status on DNA from FFPE tissue	ddCAP	1 Kit (24 Tests)	RUO	ADX-NCP04-R

If you have any questions, please contact your local sales representative or our product management team (molpath@zytomed-systems.de)

Learn more: www.zytomed-systems.com

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