EntroGen
Predictive • Preventive • Personalized

Thyroid Cancer Mutation Panel

ONCOLOGY

Mutations in Thyroid Cancer

Thyroid cancer is the most common endocrine malignancy in the United States. Recent studies have identified two types of genetic alterations in thyroid cancer; point mutations in BRAF, KRAS, NRAS, or HRAS, and chromosomal translocations involving RET/PTC1, RET/PTC3, or PAX8/PPARγ. Detection of these genetic markers enables definitive diagnosis of malignant tumors that are distinct from more commonly occurring thyroid nodules, which are considered to be benign.

Assay Features

The Thyroid Cancer Mutation Panel provides reagents for detection of point mutations in BRAF and RAS genes, as well as RET/PTC1,3 and PAX8/PPARγ fusion gene variants. The assay is performed in two runs; one run is performed for detection of point mutations in BRAF and RAS genes using genomic DNA as the input, and the other is performed for detection of the fusion genes using total cellular RNA. Fusion detection reactions are done using a one-step enzyme mix that combines cDNA synthesis and qPCR into a single step. The assay is optimized for use with nucleic acids isolated from FFPE, FNA and frozen tissues.

Specifications

The assay detects the following mutations:

- BRAF V600E
- KRAS codon 12/13
- NRAS codon 61
- HRAS codon 12/13/61
- RET/PTC1
- RET/PTC3
- PAX8/PPARγ

Equipment and Materials

The Thyroid Cancer Mutation Panel requires a real-time PCR instrument capable of detecting FAM and VIC fluorescent probes. This kit includes primer/probe mix for detection of all mutations listed above, enzyme mix, and validated control standards.

Columns and reagents for DNA/RNA isolation are not included.

Intended Use

The Thyroid Cancer Mutation Panel is for Research Use Only (RUO). Not for use in diagnostic procedures.

Ordering Information

Product Name	Cat. No.
Thyroid Cancer Fusion Gene Detection Kit	THRNA-RT32
Thyroid Cancer Mutation Detection Kit	THDNA-RT64

Rev 1.1