THYROID CANCER

Real-time PCR assays

Thyroid Cancer Mutation Detection Kit

Thyroid Cancer Fusion Gene Detection Kit

EntroGen

Predictive • Preventive • Personalized

THYROID CANCER

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 the 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.

AVAILABLE KITS FOR THYROID CANCER

PRODUCT NAME	CAT NO.	INTENDED USE
Thyroid Cancer Mutation Detection Kit (BRAF V600E, KRAS codon 12/13, NRAS codon 61, HRAS codon 12/13/62)	THDNA-RT64	RUO, CE-IVD
Thyroid Cancer Fusion Gene Detection Kit (RET/PTC1, RET/PTC3, PAX8/PPARγ)	THRNA-RT32	RUO, CE-IVD

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 genes 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. 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.

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

EntroGen's Thyroid Cancer kits require a real-time PCR instrument capable of detecting FAM and VIC fluorescent probes.

All reagents required for PCR amplification/detection, as well as validated reaction controls are included. Columns and reagents for DNA and RNA isolation are not included.