Gene Expression Measurement of Immuno-Oncology Targets in a Single FFPE Section Using a Novel Targeted Sequencing Assay

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Abstract

Background

The field of immuno-oncology (I-O) continues to draw intense research and academic interest, and has presented a highly varied set of experimental approaches to address the needs of researchers in this area. HTG Molecular Diagnostics has developed a targeted sequencing assay that combines a flexible approach to panel design with a single assay format, providing powerful clinical insight into immune markers.

Methods

HTG EdgeSeq Immuno-Oncology Assay:

- 13 targets
- Single assay
- Biological relevance
- Minimal hands-on Nuclease protection chemistry

HTG EdgeSeq Lymphoma Panel

- 22 targets
- Single assay
- Lymphoma-specific targets

Results

- Correlation between FFPE tissue samples from DLBCL patients with progression:
- Minimal hands-on Nuclease protection chemistry
- HTG EdgeSeq Lymphoma Panel provided valuable insight for researchers exploring the host immune response in various cancer subtypes.

Conclusions

- Identifying differential gene expression within tumor types
- Displaying similar biological results (e.g., PFS outcome correlation)
- HTG EdgeSeq Lymphoma Panel: Do not require RNA extraction from samples tested.
- Are amenable to small clinical specimens: require very little sample input (~1 mg FFPE tissue).
- Detect expression of several hundreds of genes in different sample types tested.
- Have excellent technical and instrumental reproducibility (r² > 0.93).
- Are linear over wide range of sample inputs.
- Display similar biological outcomes across all sample types.
- Identify differential gene expression within tumor types.
- Identify differential gene expression between progressors and non-progressors.