Agilent SureSelect CD CiberMed Tissue Panel

Designs by experts, available to the community

CiberMed

Aaron Newman, PhD

Ash Alizadeh, MD, PhD

Max Diehn, MD, PhD

Aki Nakao, Sr. Director Bioinformatics

Ashok Krishnamurthi, CEO

"SureSelect panels improve the accuracy and robustness of cellular profiling in your tissue samples with iSort digital cytometry."

Targeted next-generation sequencing enhances profiling of solid tissues

Agilent Community Designs (CD) for targeted next-generation sequencing (NGS) are developed in collaboration with subject matter experts in different research fields. These NGS designs are available in the Agilent SureDesign web tool as custom, made-to-order panels that provide you with robust and cost-effective sequencing results that focus on your genes or regions of interest.

CiberMed's iSort software has been trained and validated on 25 human cell types, including 22 hematopoietic cell subsets ("LM22 leukocyte gene signature matrix") and three non-immune cell types (fibroblasts, endothelial cells, and epithelial cells), to enable comprehensive cellular profiling of healthy and diseased tissue samples[1,2].

CiberMed's iSort software has been trained and validated on 22 human hematopoietic cell subsets ("LM22- Leukocyte gene signature Matrix") to enable comprehensive immune profiling from both healthy and diseased blood samples[1]. This tissue panel expands that expertise to encompass both the LM22 gene signature matric and the TR4 signature matrix encompassing; Immune cells, Fibroblasts, Endothelial cells and Epithelial cells.

When partnered with the SureSelect CD CiberMed Tissue target enrichment panel the iSort software offer a cellular profiling solution specifically aimed at investigating cell types within solid tissues, including tumors and the tumor microenvironment. The workflow has been tested with both fresh-frozen and FFPE material and provides enhanced sensitivity, accuracy, and robustness of cell profiling in both sample types.

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Advantages of targeted NGS for cellular profiling of solid tumor and tumour micro-environment

Pairing targeted RNA-Seq panels with CiberMed's iSort Fractions software offers several key advantages compared to whole-transcriptome profiling:

- Reduced sequencing cost
- Scalable to higher throughput experiments
- Enhanced accuracy, sensitivity, and robustness of the deconvolved cell types

Table 1. Ordering information for SureSelect CD CiberMed Tissue panels.

Product	Part number
SureSelect CD CiberMed Tissue 16	5282-0104
SureSelect CD CiberMed Tissue 96	5282-0105
SureSelect CD CiberMed Tissue 96A	5282-0106

References

1. Newman, A.M., et al. Robust enumeration of cell subsets from tissue expression profiles. *Nat Methods* **12** (5), 453–457 (2015). https://pubmed.ncbi.nlm.nih.gov/25822800/
2. Newman, A.M., et al. Determining cell type abundance and expression from bulk tissues with digital cytometry. Nat Biotechnology **37** (7), 773–782 (2019). https://pubmed.ncbi.nlm.nih.gov/31061481/
3. *iSort*. isort.cibermed.com. https://isort.cibermed.com/
4. Link to HEME application note. https://www.agilent.com/cs/library/applications/ap-isort-sureselect-5994-6964en-agilent.pdf

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