

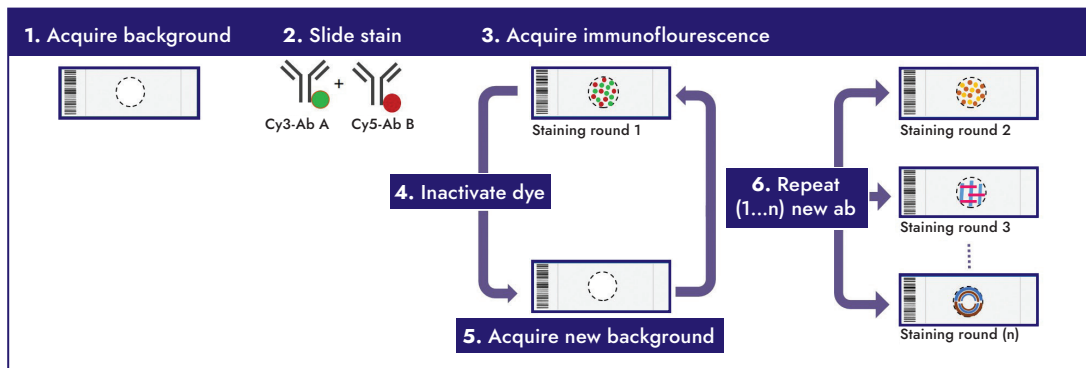
What is MultiOmyx™ ?

NeoGenomics offers MultiOmyx, a proprietary multiplexed fluorescence microscopy method, for quantitative single-cell characterization of multiple protein biomarkers from a single 4 μm FFPE tissue section. MultiOmyx technology allows for direct comparison of multiple biomarkers on the same cell, enabling unambiguous classification of diverse immune cell phenotypes and characterization of immune activation and suppression in context to the tumor and peritumoral regions.

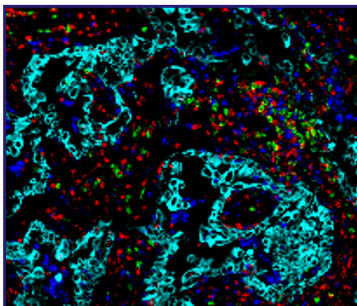
How does it work?

MultiOmyx enables visualization and characterization of up to 60 proteins in a single formalin-fixed, paraffin-embedded (FFPE) 4μm tissue section. For each round of staining, conjugated fluorescent antibodies are applied to the slide, followed by image acquisition of stained slides. The dye is

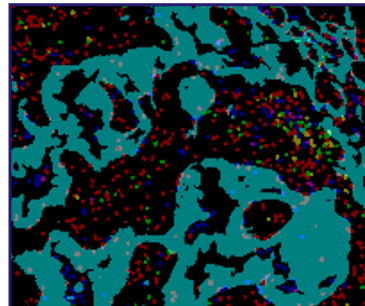
erased, enabling a subsequent round of staining with another pair of fluorescent antibodies. Proprietary AI-based cell segmentation and classification algorithms then generate unique IDs for every cell, producing single-marker and co-expression cell counts and densities.



IF overlay Image



Cell and region classification



Biomarker	Cell counts	Density in tumor (#/mm ²)	Density in stroma (#/mm ²)
DAPI	319200	NA	NA
PanCK	16920	NA	NA
CD3+	2310	238.1	675.4
CD20+	1450	80.7	361.8
CD68+	1770	160.5	556.5

Examples of pre-verified panels

Dendritic panel

16 Markers

Biomarker	Co-expression	Phenotypes
CD3	CD3+CD4+	T helper
CD4	CD3+CD8+	T cytotoxic
CD8	CD68+	TAM
CD11c	CD68+MHC II+ CD163-	M1 TAM
CD14	CD68+MHC II-CD163+	M2 TAM
CD40	CD11c+Clec9A+CD141+MHC II+	cDC
CD68	CD11c+Clec9A+CD141+CD40+	CD40 positive cDC
CD123	CD11c+Clec9A+CD141+DCLAMP+	Activated cDC
CD141	CD11c+CD14+DCSIGN+MHC II+	Monocyte derived DC
CD163	CD123+MHC II+	pDC
MHC II	CD123+MHC II+CD40+	CD40 positive pDC
Clec9A	CD123+MHC II+DCLAMP+	Activated pDC
DC-SIGN	PanCK+	Tumor marker
DC-LAMP	SOX10+	Tumor marker
SOX10/PanCK		

Immune (TIL) panel

12 Markers

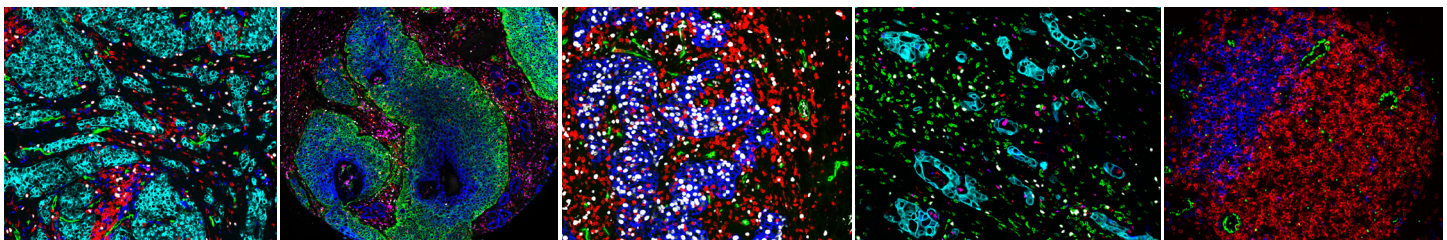
Biomarker	Co-expression	Phenotypes
CD3	CD3+CD4+	T helper
CD4	CD3+CD4+FoxP3+	T regulatory
CD8	CD3+CD4+CD45RO+	Memory T helper
CD45RO	CD3+CD4+PD1+	Immune modulation
FoxP3	CD3+CD8+	T cytotoxic
CD20	CD3+CD8+CD45RO+	Memory T cytotoxic
CD68	CD3+CD8+PD1+	Immune modulation
CD56	CD68+PDL1+	Macrophage PD-L1
CTLA-4	CD20+	B cell
PD-1	CD20+PDL1+	B cell PD-L1
PD-L1	CD3-CD56+	Natural Killer cell
PanCK	PanCK+PDL1+	Tumor cell PD-L1

Immune (TIL and Myeloid) panel

19 Markers

Biomarker	Co-expression	Phenotypes
CD3	CD3+CD4+	T helper
CD4	CD3+CD4+FoxP3+	T regulatory
CD8	CD3+CD4+PD1+	Immune modulation
CD45RO	CD3+CD8+	T cytotoxic
FoxP3	CD8+PD1+	Immune modulation
CD11b	CD8+GranzymeB+	Effector T cytotoxic
CD14	CD3+CD45RO	Memory T cells
CD15	CD68+	TAM
CD16	CD68+MHC II+CD163-	M1 TAM
CD33	CD68+MHC II-CD163+	M2 TAM
CD68	CD68+PDL1+	Macrophage PD-L1
CD163	CD11b+MHC II-	MDSC
MHC II	CD11b+MHC II-CD14+CD15-	M-MDSC
Arginase1	CD11b+MHC II-CD14-CD15+	G-MDSC
GranzymeB	PanCK+	Tumor marker
Ki67	PanCK+Ki67+	Proliferating tumor
PD-1	PanCK+PD1+	Tumor cell PD-L1
PD-L1		
PanCK		

MultiOmyx overlay images



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