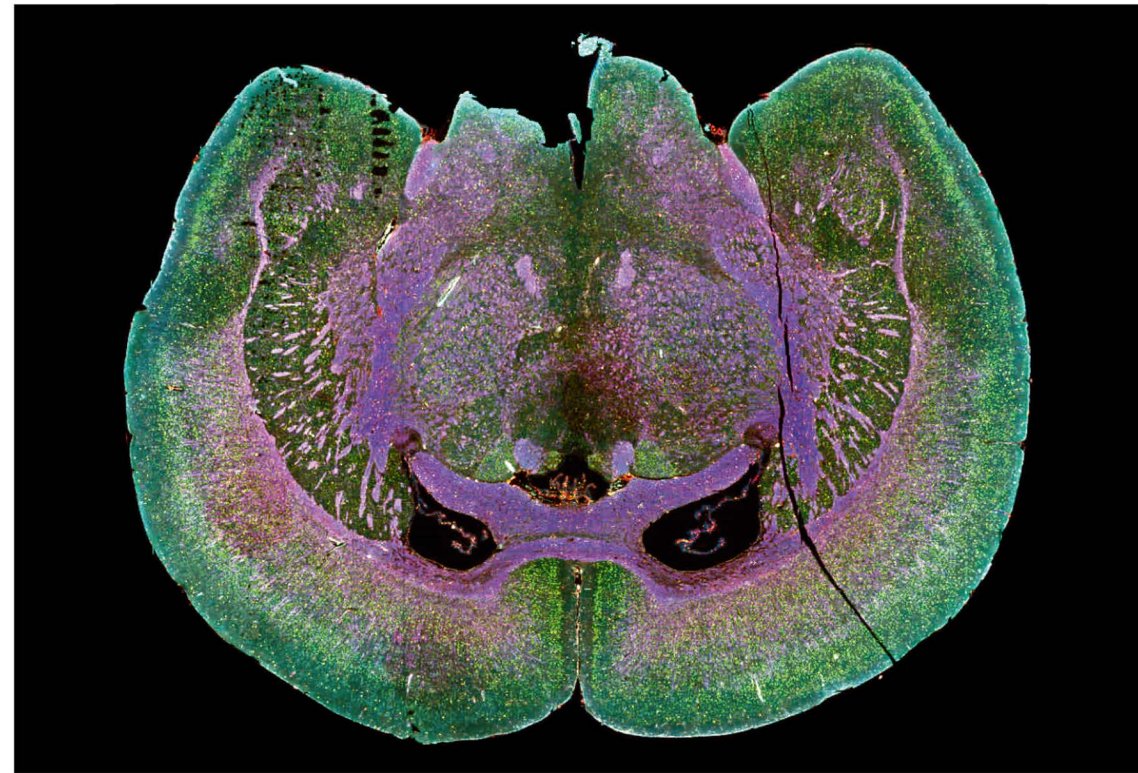


Multiplex fluorescence immunohistochemistry products

Elevating precision in cancer diagnostics



Celnovte Biotechnology Co., Ltd.

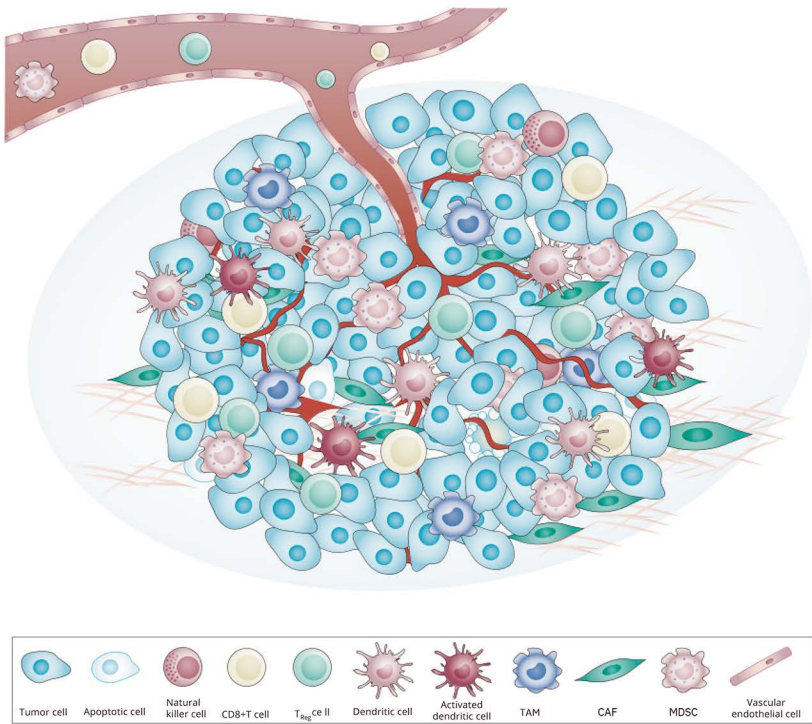
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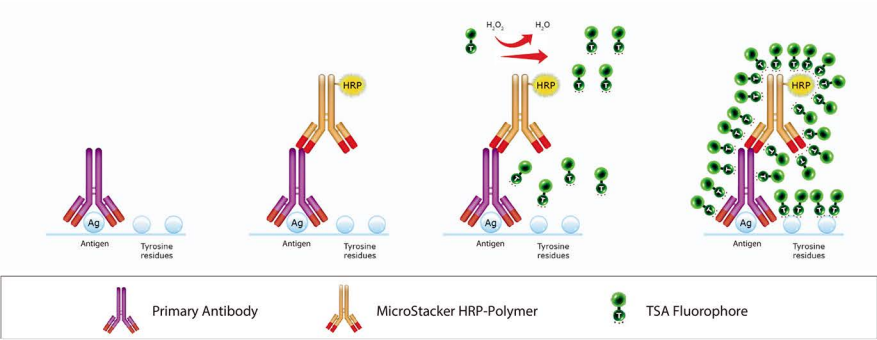
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Multiplex fluorescence immunohistochemistry technology enables comprehensive analysis of the tumor immune microenvironment. It allows for the simultaneous labeling of multiple biomarkers on a single tissue section, quantitative evaluation of cell phenotypes, and detailed understanding of complex cell interactions. This approach also provides an extensive characterization of the spatial relationships between immune microenvironments and cells within the tumor.



Multiplex fluorescence immunohistochemistry principle

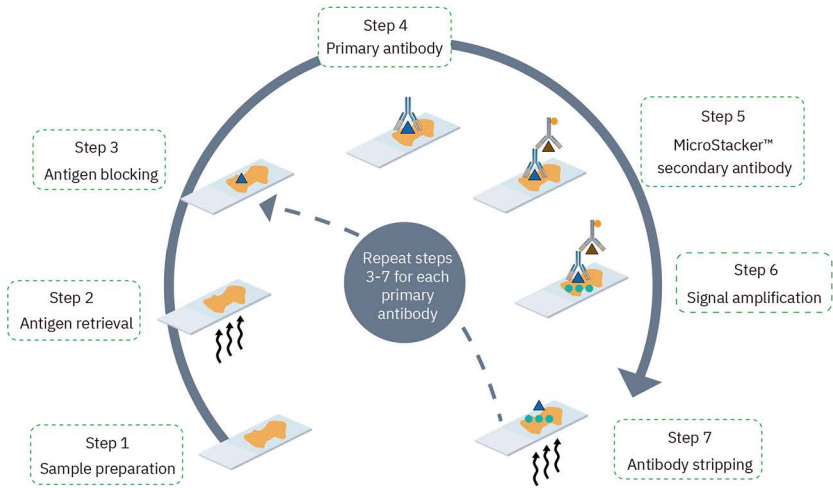
To achieve multiplex fluorescence immunohistochemistry labeling, we use tyramide signal amplification (TSA) technology. This enzymatic detection method employs horseradish peroxidase (HRP) and our proprietary Microstacker polymer technology for high signal in-situ labeling of target proteins or nucleic acids. Each labeling round involves applying a primary antibody specific to the target of interest, followed by an HRP-labeled secondary antibody that binds to the primary antibody. Fluorescence-labeled tyramide substrate is then added, allowing HRP to catalyze the tyramide substrate locally and generate an activated compound with a short half-life. This activated substrate covalently binds to tyrosine residues on proteins near the antigen, forming a stable fluorescent label. The compound's rapid loss of activity ensures that labeling is confined to the immediate vicinity of the target. Multiple rounds of labeling for different targets can be achieved by stripping antibodies using an antigen retrieval method, which does not affect the previously deposited fluorescence labels. Thus, multiple targets can be labeled within the same tissue, and primary antibodies of the same species can be used.



Advantages

- ◆ Detect 6-8 markers simultaneously, and there are no species restrictions on antibody selection
- ◆ Obtain more biological information from precious samples
- ◆ Improve target detection sensitivity and obtain specific image signals
- ◆ Achieve automated detection with high efficiency, good stability and repeatability

Procedure



Application

Drug Development

- 1. Preclinical functional evaluation of drugs: pathological analysis of MOA substance
- 2. Clinical trial accompaniment/auxiliary diagnosis: optimizing patient inclusion criteria
- 3. Developing accompanying diagnostic reagents

Clinical Research

- 1. Molecular classification of tumors: tumor immune assisted disruption
- 2. Exploring tumor heterogeneity, prognosis, and risk assessment of metastasis
- 3. Development of adjuvant tumor combination therapy strategy: the impact of radiotherapy and chemotherapy on the immune microenvironment
- 4. Observe tumor necrosis and fibrosis, analyze infection

Basic Study

- 1. Research on the Mechanism of Immune Checkpoints: Expression, Typing, and Localization of Immune Control Proteins
- 2. Tumor microenvironment: analysis of various biomarkers in situ in tissues
- 3. Multivariate organizational morphology analysis: nerves, viruses, inflammation, etc.
- 4. Analyze differential protein expression

Catalog
Human tissue

Product Name	Cat. No.	Specification	Descriptions
2-Color Multiplex fluorescence IHC kit	FM2002	20T, 50T	Goat anti-mouse/rabbit polymer detection system, 2 colors of dyes(FT570, DAPI)
3-Color Multiplex fluorescence IHC kit	FM2003	20T, 50T	Goat anti-mouse/rabbit polymer detection system, 3 colors of dyes(FT520, FT570, DAPI)
4-Color Multiplex fluorescence IHC kit	FM2004	20T, 50T	Goat anti-mouse/rabbit polymer detection system, 4 colors of dyes(FT520, FT570, FT690, DAPI)
5-Color Multiplex fluorescence IHC kit	FM2005	20T, 50T	Goat anti-mouse/rabbit polymer detection system, 5 colors of dyes(FT520, FT570, FT620, FT690, DAPI)
6-Color Multiplex fluorescence IHC kit	FM2006	20T, 50T	Goat anti-mouse/rabbit polymer detection system, 6 colors of dyes(FT480,FT520J FT570, FT620, FT690,DAPI)
7-Color Multiplex fluorescence IHC kit	FM2007	20T, 50T	Goat anti-mouse/rabbit polymer detection system, 7 colors of dyes(FT480, FT520, FT570, FT620, FT690, FT780, DAPI)

mouse tissue

Product Name	Cat. No.	Specification	Descriptions
2-Color Multiplex fluorescence IHC kit	FM2012	20T, 50T	Goat anti-rabbit polymer detection system, 2 colors of dyes(FT570, DAPI)
3-Color Multiplex fluorescence IHC kit	FM2013	20T, 50T	Goat anti-rabbit polymer detection system, 3 colors of dyes(FT520, FT570, DAPI)
4-Color Multiplex fluorescence IHC kit	FM2014	20T, 50T	Goat anti-rabbit polymer detection system, 4 colors of dyes(FT520, FT570, FT690, DAPI)
5-Color Multiplex fluorescence IHC kit	FM2015	20T, 50T	Goat anti-rabbit polymer detection system, 5 colors of dyes(FT520, FT570, FT620, FT690, DAPI)
6-Color Multiplex fluorescence IHC kit	FM2016	20T, 50T	Goat anti-rabbit polymer detection system, 6 colors of dyes(FT480,FT520J FT570, FT620, FT690,DAPI)
7-Color Multiplex fluorescence IHC kit	FM2017	20T, 50T	Goat anti-rabbit polymer detection system, 7 colors of dyes(FT480, FT520, FT570, FT620, FT690, FT780, DAPI)

Other reagents

Product Name	Cat. No.	Specification	Descriptions
Single color TSA dye - CM480	FT480	20T, 50T	480 Dye (Ex: 425nm, Em: 485nm), Amplification Solution
Single Color ISA dye - CM520	FT520	20T, 50T	520 Dye (Ex: 490nm, Em: 520nm), Amplification Solution
Single Color TSA dye - CM540	FT540	20T, 50T	540 Dye (Ex: 520nm, Em: 535nm), Amplification Solution
Single Color ISA dye - CM570	FT570	20T, 50T	570 Dye (Ex: 550nm, Em: 570nm), Amplification Solution
Single Color TSA dye - CM620	FT620	20T, 50T	620 Dye (Ex: 585nm, Em: 615nm), Amplification Solution
Single Color TSA dye - CM650	FT650	20T, 50T	650 Dye (Ex: 625nm, Em: 650nm), Amplification Solution
Single Color TSA dye - CM690	FT690	20T, 50T	690 Dye (Ex: 675nm, Em: 690nm), Amplification Solution
Single Color TSA dye - CM780	FT780	20T, 50T	780 Dye (Ex: 750nm, Em: 770nm), Amplification Solution, Amplification Solution plus
DAPI	FTDAPI	20T, 50T	DAPI Stain Ready-to-Use (Ex: 355nm, Em: 460nm),
IHC Antigen Retrieval Buffer (CBS)	SD2001	2.0L/bottle	Acid Antigen Retrieval
IHC Antigen Retrieval Buffer (EDTA, 50X)	SD2003	50mL/bottle	Basic Antigen Retrieval
TBS Concentrated Wash Solution (10X)	SD2004	50mL/bottle, 2.5L/bottle	Washing solution
Tissue Autofluorescence Quencher	FM1101	2mL,5mL	Quench tissue autofluorescence to reduce background
Anti-fade mounting medium	FM1102	2mL,5mL	Mount slides and delay fluorescence fading

Celnovte has over 400 pathological antibodies, widely used in clinical practice, covering popular targets such as tumor regulation/formation, tumor microenvironment, immune checkpoint and immune regulation, tumor specific biomarkers, and tumor stem cells.

Common Targets List

 T Cell	CD3、CD4、CD8、FOXP3、CD45RO、Granzyme B
 B Cell	CD19、CD20、CD21
 Dendritic cell	CD11c、CD123、HLA-DR
 NK Cell	CD56、CD16、CD56、CD57、CD161
 Macrophage	CD68、CD163
 Monocyte	CD14、CD16
 MDSC	CCR2、CD11b
 Immune Inhibitor	PD-1、PD-L1、Claudin 18.2、TIM3、LAG3、STING、IDO、CD47、CTLA-4、TIGIT、VISTA
 Cancer marker	Ki-67、pan-ck