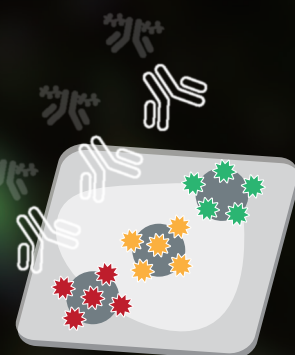


mIHC

多重荧光免疫组化

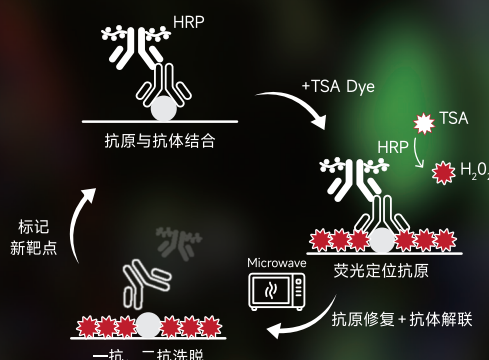
Multiplex Immunohistochemistry



多重荧光免疫组化 (Multiplex Immunohistochemistry, mIHC)

是在常规免疫组化实验 (Immunohistochemistry, IHC) 的基础上, 结合酪胺信号放大技术 (Tyramide signal amplification, TSA) 所衍生出的一项新实验应用, 主要原理是利用酪胺的过氧化物酶反应 (酪胺盐在 HRP 催化 H_2O_2 下形成共价键结合位点), 产生大量的酶促产物。该产物能与周围的蛋白残基 (酪氨酸残基) 结合, 在抗原-抗体结合部位生成大量的生物素沉积, 并与随后加入的荧光基团结合。经几次这样的循环放大, 可以结合大量的酶分子或荧光基团, 从而使其检测信号得到指数级放大

组织染色过程中, 首先孵育第一个靶点对应的一抗、二抗, 并选择合适的 TSA 染料定位目的蛋白, 随后采用热修复法处理去除非共价结合的抗体。重复该过程即可对下一个靶点进行染色, 最后使用 DAPI 染核封片



TSA 多重标记原理

通过“清除旧抗体后孵育新抗体和荧光染色”的方式实现不同指标的标记染色

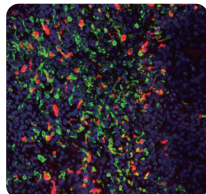
mIHC 用于荧光组化比传统 IF 更有优势

比对项目	多重荧光免疫组化	传统 IF
检测范围	支持最多 7 色 7 指标共染 (含 DAPI)	超过 3 种荧光时, 信号干扰变大
染色效果	分辨率和特异性高, 信号稳定持久	亮度一般, 易淬灭, 结果受多因素影响
抗体搭配	可使用同一宿主来源的一抗, 二抗为 HRP 标记	需寻找不同种属来源的一抗, 二抗为不同荧光探针标记
实验成本	单一宿主, 抗体易选购	部分稀有宿主抗体价格昂贵, 需多次摸索条件
染色策略	重复操作抗体孵育 + 染色步骤即可	需仔细考虑样本和指标特点, 设计方案
应用范围	所用 HRP 二抗也可用于其他实验	二抗不通用, 应用受限

仅适用于石蜡切片

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (Double)

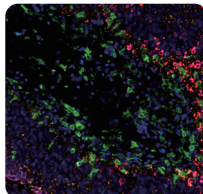
#18002 产品规格: 20T / 50T / 100T



TSA-520 Dye; Ex/Em: 488/520nm
TSA-570 Dye; Ex/Em: 555/570nm

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (Quintuple)

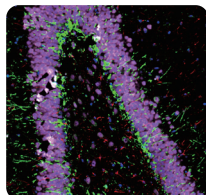
#18006 产品规格: 20T / 50T / 100T



TSA-520 Dye; Ex/Em: 488/520nm
TSA-570 Dye; Ex/Em: 555/570nm
TSA-620 Dye; Ex/Em: 590/620nm
TSA-690 Dye; Ex/Em: 630/690nm
TSA-780 Dye; Ex/Em: 750/780nm

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (Triple)

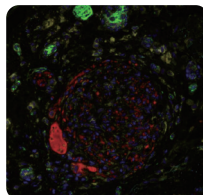
#18003 产品规格: 20T / 50T / 100T



TSA-520 Dye; Ex/Em: 488/520nm
TSA-570 Dye; Ex/Em: 555/570nm
TSA-690 Dye; Ex/Em: 630/690nm

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (Sextuple)

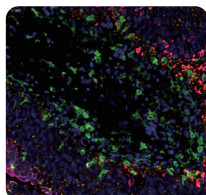
#18007 产品规格: 20T / 50T / 100T



TSA-480 Dye; Ex/Em: 450/480nm
TSA-520 Dye; Ex/Em: 488/520nm
TSA-570 Dye; Ex/Em: 555/570nm
TSA-620 Dye; Ex/Em: 590/620nm
TSA-690 Dye; Ex/Em: 630/690nm
TSA-780 Dye; Ex/Em: 750/780nm

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (Quadruple)

#18005 产品规格: 20T / 50T / 100T



TSA-520 Dye; Ex/Em: 488/520nm
TSA-570 Dye; Ex/Em: 555/570nm
TSA-620 Dye; Ex/Em: 590/620nm
TSA-690 Dye; Ex/Em: 630/690nm

文献引用：IF=9.5 Biomarker Research

Single-cell and spatial transcriptomics reveal alterations in trophoblasts at invasion sites and disturbed myometrial immune microenvironment in placenta accreta spectrum disorders

引用产品：#18003FC；样本：Human；应用：IF

文献引用：IF=8.6 Cell Death & Disease

The enhanced energy metabolism in the tumor margin mediated by RRAD promotes the progression of oral squamous cell carcinoma

引用产品：#18003；样本：Human；应用：IF

文献引用：IF=4.3 Pharmaceuticals

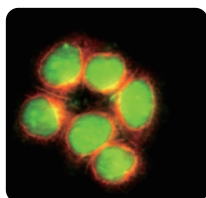
Effects of the N-Butanol Extract of Pulsatilla Decoction on Neutrophils in a Mouse Model of Ulcerative Colitis

引用产品：#18002；样本：Mouse；应用：IF

适用于多种实验需求 (石蜡 / 冰冻切片, 细胞爬片)

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (For Frozen section /Cell slides, Double)

#18002FC 产品规格: 20T / 50T / 100T



TSA-520 Dye
Ex: 488nm/Em: 520nm

TSA-570 Dye
Ex: 555nm/Em: 570nm

Goat Anti-Mouse/Rabbit Multiplex IHC Detection Kit (For Frozen section /Cell slides, Triple)

#18003FC 产品规格: 20T / 50T / 100T

TSA-520 Dye; Ex: 488nm / Em: 520nm
TSA-570 Dye; Ex: 555nm / Em: 570nm
TSA-690 Dye; Ex: 630nm / Em: 690nm

