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TBNK研究解决方案 TBNK Research Solutions

• 从基础到临床的精准免疫分析工具
让研究变得简单

 华安生物
H U A B I O

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TBNK免疫细胞研究全面解决方案 — 从基础到临床的精准免疫分析工具

TBNK免疫细胞（T细胞、B细胞、NK细胞及其亚群）作为免疫系统的核心组成部分，在肿瘤免疫微环境、代谢-免疫调控以及多种疾病治疗中扮演着关键角色。随着免疫治疗领域的快速发展，对TBNK细胞的精准检测与功能分析已成为基础研究和临床转化的关键环节。

作为生命科学研究的专业供应商，我们基于最新研究成果，开发了一系列高灵敏度、高特异性的研究工具，助力科研人员揭示TBNK细胞的复杂生物学特性。

公司产品线



产品技术优势

流式抗体
多色标记；
高稳定性；
重组表达，批次一致性。

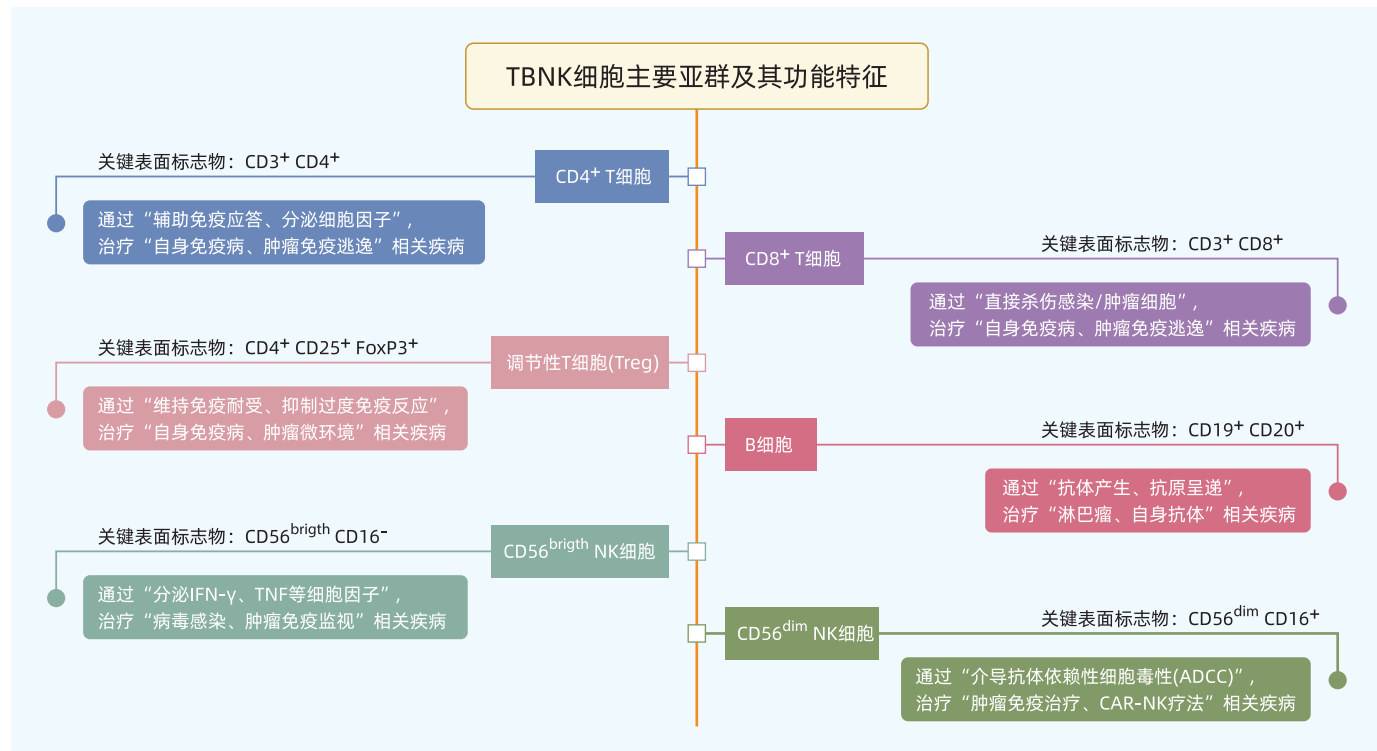
mIHC 抗体
高特异性，低亲和特性；
温和友好，兼容性强；
广泛的异种属选择（人、小鼠、大鼠）。

ELISA 试剂盒
高灵敏度；
高精密度；
高稳定性；
开盒即用，完全即用型。

免疫检测原料
CE认证；
稳定可靠；
种类丰富，满足前沿研究需求。

TBNK免疫细胞研究的前沿领域与解决方案

TBNK免疫细胞构成了适应性免疫和先天免疫系统的核心力量，其动态平衡与功能状态直接决定了机体的免疫应答效能。近年来，随着单细胞技术、代谢组学和表观遗传学的快速发展，科学家们对TBNK细胞在免疫微环境调控、代谢重编程以及疾病治疗中的作用有了更深入的认识。

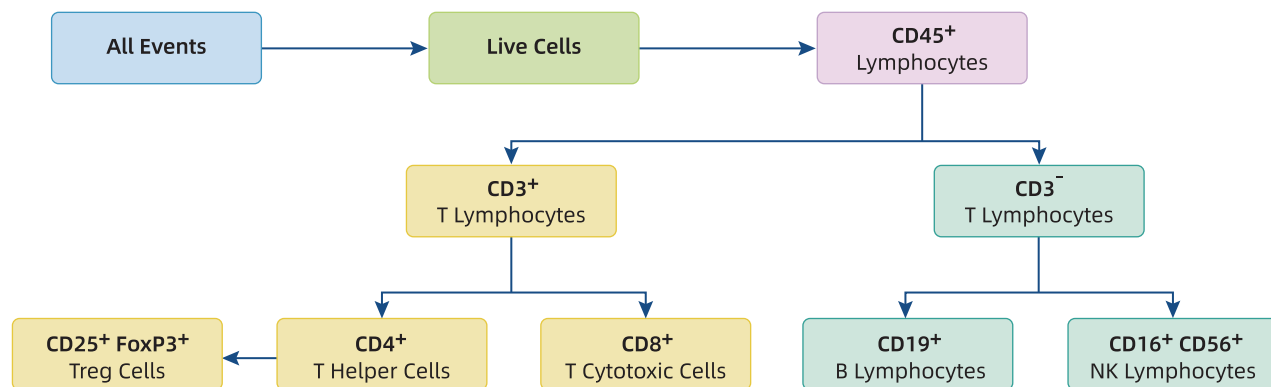


基于这些前沿科学发现，我们精心打造了TBNK免疫细胞研究全面解决方案，涵盖从基础标志物检测到深层功能分析的全流程产品，帮助研究人员更全面、更精准地探索免疫细胞的奥秘，加速转化医学研究进程。

TBNK细胞亚群的流式检测与功能解析

TBNK细胞亚群的精细分类与功能解析已成为免疫学研究的前沿领域。这些亚群在免疫应答中发挥协同作用，其比例失衡与多种疾病密切相关。

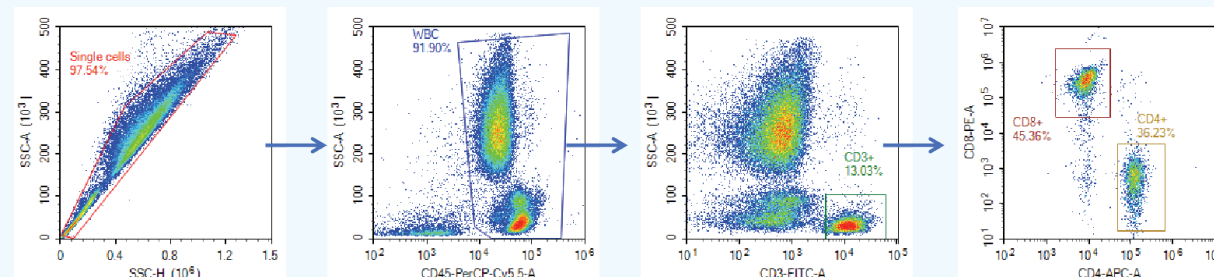
流式细胞术是目前检测TBNK淋巴细胞亚群的金标准，通过多色荧光标记和流式细胞仪分析，可以精确量化各亚群的百分比和绝对计数。



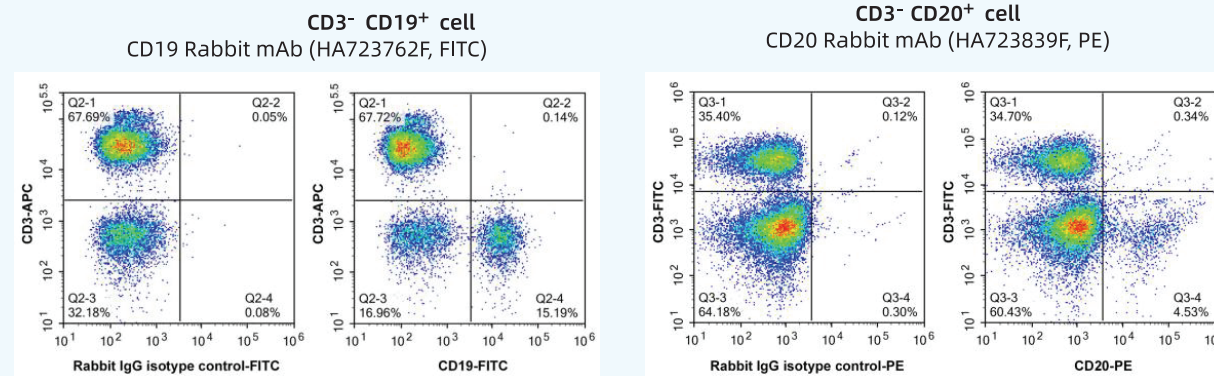
TBNK免疫细胞流式分析逻辑圈门示意图

验证数据精选

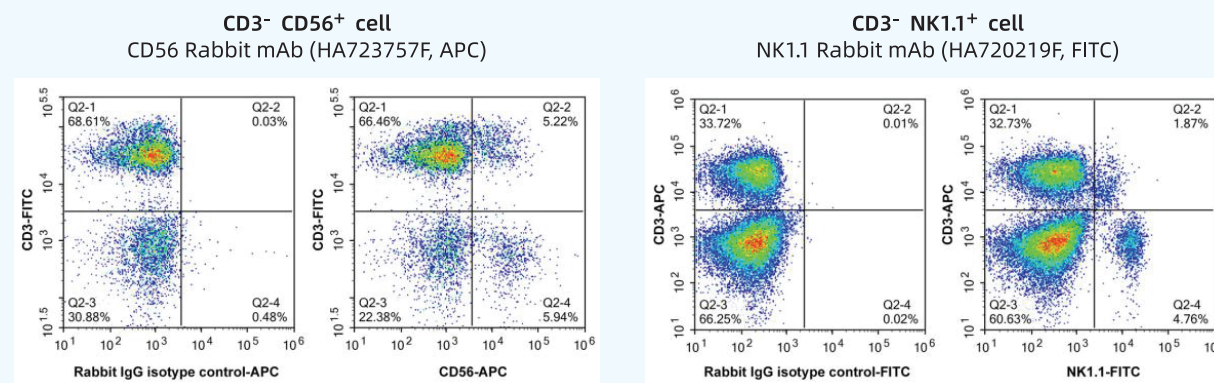
Human T cell 多色流式方案



Human B cell 流式检测



Human / Mouse NK cell 流式检测



特色产品推荐

T 细胞					
Product name	Catalog#	Reactivity	Tested applications	Antibody type	Conjugates
CD45RO	HA601531F	H	FC	Mouse mAb	PE
human CD45	HA600109F	H	FC	Mouse mAb	iFluor™ 488
Human CD45	HA600125F	H	FC	Mouse mAb	FITC
Human CD45	HA600127F	H	FC	Mouse mAb	APC
Human CD45	HA600126F	H	FC	Mouse mAb	PE
Human CD45	HA600128F	H	FC	Mouse mAb	Percp
Human CD45RA	HA600131F	H	FC	Mouse mAb	FITC
Human CD45RA	HA601341	H	FC,IF-Cell,IHC-P	Mouse mAb	Non-conjugated
Human CD45RA	HA601525F	H	FC	Mouse mAb	PE
Human CD3	HA600116F	H	FC	Mouse mAb	FITC
Human CD3	HA600118F	H	FC	Mouse mAb	APC
Human CD3	HA600117F	H	FC	Mouse mAb	PE
Human CD3	HA601337	H	FC	Mouse mAb	Non-conjugated
Human CD4	HA600119F	H	FC	Mouse mAb	FITC
Human CD4	HA600121F	H	FC	Mouse mAb	APC
Human CD4	HA600120F	H	FC	Mouse mAb	PE
Human CD4	HA601338	H	FC	Mouse mAb	Non-conjugated
Human CD8 alpha	HA600122F	H	FC	Mouse mAb	FITC
Human CD8 alpha	HA600124F	H	FC	Mouse mAb	APC
Human CD8 alpha	HA600123F	H	FC	Mouse mAb	PE
Human CD8 alpha	HA601339	H	FC	Mouse mAb	Non-conjugated
Mouse CD3	HA720199F	Ms	FC	Chimeric Ab	FITC
Mouse CD3	HA720201F	Ms	FC	Chimeric Ab	APC
Mouse CD3	HA720200F	Ms	FC	Chimeric Ab	PE
Mouse CD3	HA723347	Ms	FC	Chimeric Ab	Non-conjugated
Mouse CD4	HA720202F	Ms	FC	Chimeric Ab	FITC
Mouse CD4	HA720204F	Ms	FC	Chimeric Ab	APC
Mouse CD4	HA720203F	Ms	FC	Chimeric Ab	PE
Mouse CD8 alpha	HA720205F	Ms	FC	Chimeric Ab	FITC
Mouse CD8 alpha	HA720207F	Ms	FC	Chimeric Ab	APC
Mouse CD8 alpha	HA720206F	Ms	FC	Chimeric Ab	PE
CD25 / IL-2 Receptor alpha	HA601486	H	FC	Mouse mAb	Non-conjugated
CD25 / IL-2 Receptor alpha	HA601530F	H	FC	Mouse mAb	APC
TIM 3	HA723169	H	WB,IF-Cell,FC,IP	Rabbit mAb	Non-conjugated
CD127	HA601429	H	FC	Mouse mAb	Non-conjugated
CD127	HA601536F	H	FC	Mouse mAb	APC
TCR beta chain	HA601535	Ms	FC	Mouse mAb	Non-conjugated
TRBC1	HA601524	H	FC	Mouse mAb	Non-conjugated

B 细胞					
Product name	Catalog#	Reactivity	Tested applications	Antibody type	Conjugates
CD19	HA601518F	H	FC	Mouse mAb	FITC
CD19	HA723762F	H	FC	Rabbit mAb	FITC
CD19	HA723761F	H	FC	Rabbit mAb	APC
CD19	HA723763F	H	FC	Rabbit mAb	PE
CD20	HA722953	H	WB, IF-Cell, IHC-P, FC, IP	Rabbit mAb	Non-conjugated
CD20	HA723838F	H	FC	Rabbit mAb	APC
CD20	HA723839F	H	FC	Rabbit mAb	PE
CD81	HA723193	H,R	WB,IHC-P,FC	Rabbit mAb	Non-conjugated
Human CD10	HA720209F	H	FC	Rabbit mAb	FITC
Human CD5	HA720211F	H	FC	Rabbit mAb	FITC
Human CD5	HA722210	H	IF-Cell,FC	Rabbit mAb	Non-conjugated
Human CD58	HA720198F	H	FC	Rabbit mAb	FITC
CD27	HA723828F	H	FC	Rabbit mAb	APC
NK 细胞					
Product name	Catalog#	Reactivity	Tested applications	Antibody type	Conjugates
CD94	HA601491	H	FC	Mouse mAb	Non-conjugated
CD94	HA601529F	H	FC	Mouse mAb	APC
Human CD16	HA600129F	H	FC	Mouse mAb	PE
Human CD16	HA601340	H	FC	Mouse mAb	Non-conjugated
Human NCAM1 / CD56	HA720215F	H	FC	Rabbit mAb	PE
Human NCAM1 / CD56	HA723757F	H	FC	Rabbit mAb	APC
Mouse CD16/32	HA720216F	Ms	FC	Rabbit mAb	PE
NK1.1	HA720219F	Ms	FC	Rabbit mAb	FITC
免疫调节分子					
Product name	Catalog#	Reactivity	Tested applications	Antibody type	Conjugates
CD47	HA600104F	H	FC	Mouse mAb	iFluor™ 488
Human CD200	HA720208F	H	FC	Rabbit mAb	FITC
Human CD200R1	HA720212F	H	FC	Rabbit mAb	FITC
Human CD200R1	HA722211	H	IF-Cell,FC	Rabbit mAb	Non-conjugated
Mouse PD-L1	HA720213F	Ms	FC	Rabbit mAb	FITC
Mouse PD-L1	HA722208	Ms	FC	Rabbit mAb	Non-conjugated
Mouse PD-L1	HA722209	Ms	FC	Rabbit mAb	Non-conjugated
VISTA	HA720183F	H	FC	Rabbit mAb	iFluor™ 488
同型对照					
Product name	Catalog#	Reactivity	Tested applications	Antibody type	Conjugates
Human IgD	HA601487	H	FC	Mouse mAb	Non-conjugated
Human IgD	HA601526F	H	FC	Mouse mAb	FITC
Human IgE	HA601489	H	FC	Mouse mAb	Non-conjugated
Human IgE	HA601527F	H	FC	Mouse mAb	PE

同型对照					
Product name	Catalog#	Reactivity	Tested applications	Antibody type	Conjugates
Human IgM	HA601488	H	FC	Mouse mAb	Non-conjugated
Mouse IgG1	HA600113F		FC	Mouse mAb	FITC
Mouse IgG1	HA600114F		FC	Mouse mAb	PE
Mouse IgG1	HA600115F		FC	Mouse mAb	APC
Rabbit IgG	HA720191F		FC	Rabbit mAb	FITC
Rabbit IgG	HA720192F		FC	Rabbit mAb	PE
Rabbit IgG	HA720193F		FC	Rabbit mAb	APC

*H: Human; Ms: Mouse; R: Rat

TBNK免疫细胞在免疫微环境研究中的关键靶点与工具

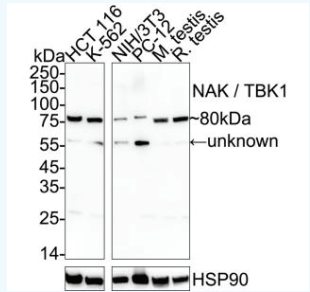
肿瘤免疫微环境是一个高度复杂的生态系统，其中TBNK免疫细胞的组成、空间分布及功能状态直接影响抗肿瘤免疫应答的效能。深入了解这些细胞在肿瘤微环境中的动态变化，对于开发有效的免疫治疗策略至关重要。

研究靶点	热销产品推荐	生物学意义
TBK1/p-TBK1	TBK1 rabbit mAb HA723365	介导肿瘤免疫逃逸，与PD-1治疗抵抗相关
CD8 ⁺ T细胞耗竭标志物 (PD-1、TIM-3、LAG-3)	PD1 rabbit mAb ET1606-41	评估T细胞功能状态，预测免疫治疗响应
	TIM 3 rabbit mAb HA723169	
	LAG-3 rabbit mAb HA721346	
CD56 ^{bright} trNK细胞	CD56 rabbit mAb HA722755	组织驻留NK细胞，具有独特代谢特征和效应功能
	CD56 rabbit mAb IRS026	
	FOXP3 rabbit mAb IRS008	
Treg细胞 (FoxP3 ⁺ CD25 ⁺)	FOXP3 rabbit mAb IRS053	维持免疫耐受，抑制抗肿瘤免疫应答
	CD25 rabbit mAb HA601530F	
	CD19 rabbit mAb HA722073	
B细胞亚群 (记忆B细胞、浆细胞)	CD19 rabbit mAb HA722073	参与肿瘤相关抗体反应，影响免疫治疗响应
	CD20 rabbit mAb ET1605-33	

肿瘤免疫微环境中TBNK细胞研究的关键靶点

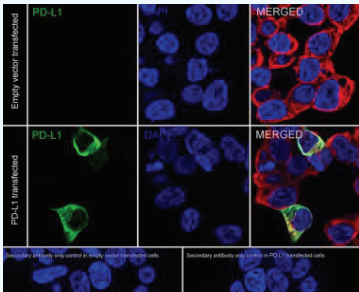
基于最新研究进展，我们开发了一系列高特异性的研究工具，助力科研人员精准解析肿瘤免疫微环境的异质性，并识别潜在的免疫治疗靶点。

1. 免疫检查点分子在肿瘤微环境的免疫抑制中扮演核心角色。除经典的PD-1/PD-L1和CTLA-4通路外，研究发现TBK1（TANK结合激酶1）是介导肿瘤免疫逃逸的关键分子。



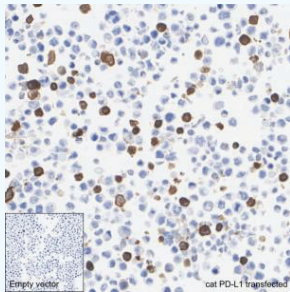
TBK1 兔单抗 | HA723365

不同样本裂解液 WB 分析
(1/10,000 dilution)



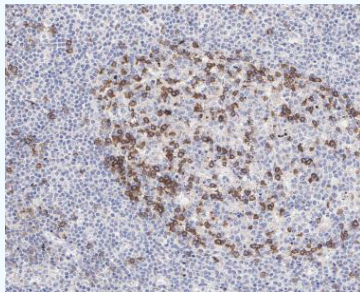
PD-L1 兔单抗 | HA723002

293T细胞 IF-Cell 分析 (1/5,000 dilution)



PD-L1 兔单抗 | HA723002

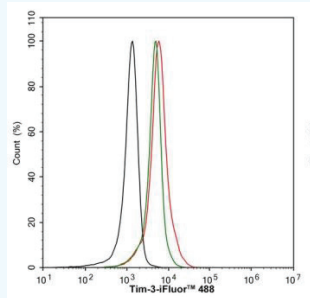
293T细胞 IHC-P 分析
(1/20,000 dilution)



PD1 兔单抗 | ET1606-41

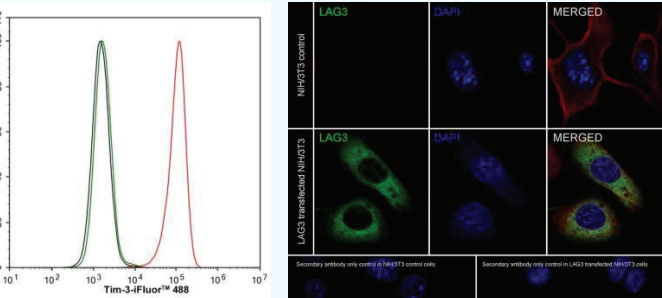
人脑淋巴结组织 IHC-P 分析 (1/50 dilution)

2. T细胞耗竭标志物的检测是评估肿瘤微环境中免疫功能的重要指标。耗竭性T细胞通常高表达多种抑制性受体，如TIM-3、LAG-3和TIGIT等。



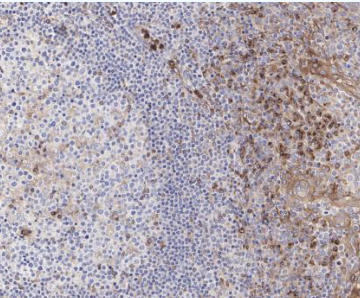
TIM 3 兔单抗 | HA723169

HT-29 (阴性) 和RPMI 8226 (阳性)细胞 FC 分析 (1/1,000 dilution)



LAG-3 兔单抗 | HA721346

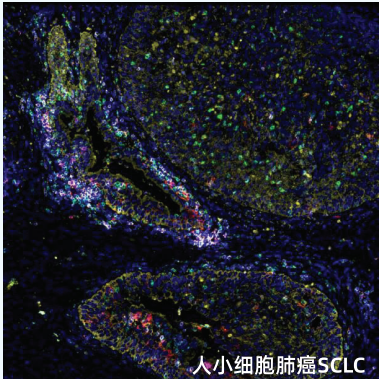
NIH/3T3细胞 IF-Cell 分析 (1/100 dilution)



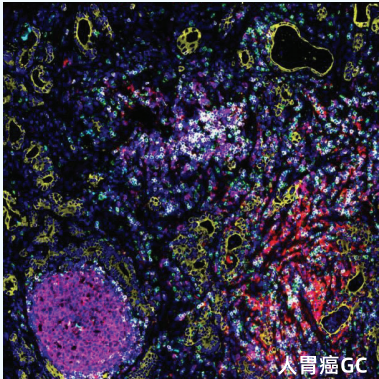
VISTA 兔单抗 | HA721452

人扁桃体组织 IHC-P 分析 (1/1,000 dilution)

空间组学技术为理解免疫细胞-肿瘤细胞互作提供了全新视角。**TSA技术凭借其多重检测能力和空间信息保留特性，已成为解析肿瘤微环境空间架构的核心工具**，为理解肿瘤-免疫相互作用提供了新视角。



人小细胞肺癌SCLC

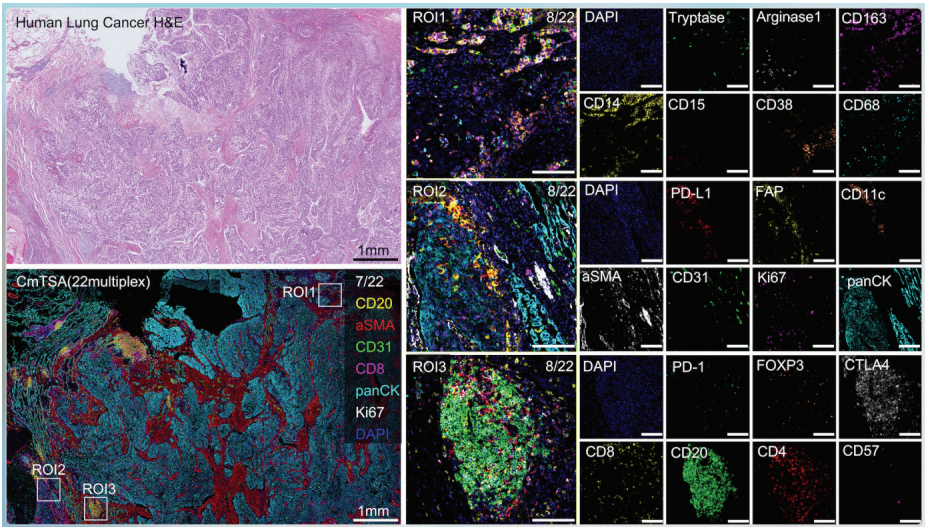


人胃癌GC

肿瘤免疫微环境机制探索

六标七色Panel: PD-L1红，CD8绿，CD3白，CD68青，CD20紫，panCK黄，DAPI蓝
染色结果分析：肿瘤组织内部活跃的T淋巴细胞浸润进入肿瘤实质，同时肿瘤细胞表达PD-L1抑制T细胞功能。

我们的多重免疫荧光系统可在组织切片上同时检测3-60种标志物，精确解析TBNK细胞在肿瘤中的空间分布模式。如下所示，在肺癌免疫研究中，一个TSA panel可同时包含**免疫细胞标记（如CD3、CD8、CD20、CD157、CD63、CD57等）**、**功能标志物（如PD-1、Foxp3等）**、**免疫检查点（PD-L1、CTLA-4等）**、**增殖指标（Ki-67）**以及**肿瘤细胞特异性标记（如panCK）**，从而全面解析肺癌中肿瘤-免疫相互作用的多维特征。



人肺癌- 22指标共染

针对肿瘤免疫微环境研究的复杂性，我们还提供**定制化服务**，根据客户的具体研究需求设计多色流式方案、以及开发特殊标志物的检测方法，包括抗体和试剂盒等，助力科研人员在肿瘤免疫领域取得突破性发现。

特色产品推荐

Product name	Catalog#	Reactivity	Tested applications	Antibody type
alpha smooth muscle Actin	ET1607-53	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC,mIHC	Rabbit mAb
Beta Catenin	ET1601-5	H,Ms,R	WB,IHC-P,IF-Tissue,IP,mIHC,IF-Cell,IHC-Fr,FC	Rabbit mAb
Cathepsin K	HA500469	H	WB,IF-Cell	Rabbit pAb
Cathepsin L	HA722063	H,Ms,R,Mk	WB,IHC-P,FC	Rabbit mAb
CD105	HA720072	H	WB,IHC-P,IF-Tissue	Rabbit mAb
CD11b	ET1706-04	H	WB,IP,IHC-P,IF-Cell,IF-Tissue,mIHC	Rabbit mAb
CD11b mlHC抗体	IRS014	H	mIHC	Rabbit mAb
CD11c	ET1606-19	H	WB,IHC-P,IP,mIHC,IF-Tissue	Rabbit mAb
CD11c mlHC抗体	IRS001	H	mIHC	Rabbit mAb
CD11c mlHC抗体	IRS084	Ms	mIHC	Rabbit mAb
CD15	HA721246	H	IHC-P,mIHC,FC	Rabbit mAb
CD57	HA601114	H	IHC-P,mIHC,IF-Tissue	Mouse mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
CD57 mlHC抗体	IRS027	H	mIHC	Mouse mAb
CD123 / IL3RA	HA601490	H	FC	Mouse mAb
CD14	ET1610-85	H,Ms	WB,IF-Cell,IHC-P,mIHC,FC	Rabbit mAb
CD147	ET1702-58	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
CD16 mlHC抗体	IRS017	H	mIHC	Rabbit mAb
CD163	ET1704-43	H	WB,IHC-P,mIHC,IF-Tissue,IP	Rabbit mAb
CD163 mlHC抗体	IRS002	H	mIHC	Rabbit mAb
CD168	HA721775	H	WB,IF-Cell,IHC-P,FC	Rabbit mAb
CD19 mlHC抗体	IRS018	H	mIHC	Rabbit mAb
CD20	HA721138	H,Ms	IHC-P,mIHC,WB,IF-Cell,IP	Rabbit mAb
CD20 mlHC抗体	IRS003	H	mIHC	Rabbit mAb
CD22	HA721157	H	WB,IHC-P,IF-Tissue	Rabbit mAb
CD25 / IL-2 Receptor alpha	HA601486	H	FC	Mouse mAb
CD26	ET1703-93	H,Ms,R	WB	Rabbit mAb
CD27	ET7107-73	H,Ms,R	WB,IHC-P	Rabbit mAb
CD27	HA723042	H	WB,IF-Cell,IHC-P,FC,IP	Rabbit mAb
CD3 mlHC抗体	IRS022	H	mIHC	Rabbit mAb
CD3	HA720082	H	WB,IHC-P,IF-Tissue,IP,mIHC,IF-Cell	Rabbit mAb
CD30	HA722093	H	WB,IF-Cell,IHC-P,IF-Tissue	Rabbit mAb
CD31	M1511-8	H,Ms	WB,IF-Cell,IHC-P,mIHC	Mouse mAb
CD31 mlHC抗体	IRS023	H	mIHC	Mouse mAb
CD34	ET1606-11	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,mIHC,FC	Rabbit mAb
CD34 mlHC抗体	IRS024	H	mIHC	Rabbit mAb
CD34 mlHC抗体	IRS050	Ms	mIHC	Rabbit mAb
CD3D	ET1701-57	H	WB,IF-Cell,IHC-P,FC,IP,IF-Tissue	Rabbit mAb
CD3G	ET7107-55	H,Ms	WB,IHC-P,FC,IP,IF-Cell,IF-Tissue	Rabbit mAb
CD4	ET1609-52	H	WB,IF-Cell,IF-Tissue,IHC-P,FC,mIHC	Rabbit mAb
CD4 mlHC抗体	IRS005	H	mIHC	Rabbit mAb
CD4 mlHC抗体	IRS051	Ms	mIHC	Rabbit mAb
CD45	ET7111-03	H	WB,IHC-P,FC,IF-Tissue,mIHC	Rabbit mAb
CD45 mlHC抗体	IRS025	H	mIHC	Rabbit mAb
CD45	HA723506	Ms	WB,IHC-P,IHC-Fr,FC,IF-Cell,IF-Tissue	Rabbit mAb
CD68	HA601115	H	IHC-P,IF-Cell,FC,mIHC,IF-Tissue	Mouse mAb
CD68 mlHC抗体	IRS004	H	mIHC	Mouse mAb
CD99	ET1702-35	H	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
CEACAM1	HA721507	H	WB,IHC-P	Rabbit mAb
COL1A1	HA722517	H,Ms,R	WB,IHC-P,IF-Tissue,IF-Cell,FC,IP,mIHC,IHC-Fr	Rabbit mAb
Collagen III	HA720050	H,Ms,R	WB,IF-Cell,FC	Rabbit mAb
Collagen IV	HA500197	H	WB,IF-Cell	Rabbit pAb
Collagen VI	ET1612-91	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
COX2/Cyclooxygenase 2	ET1610-23	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
CSF-1-R	HA723142	H,Ms,R	WB,IHC-P	Rabbit mAb
CTLA-4	HA721269	H,Ms	IHC-P,miHC	Rabbit mAb
CXCR4	HA722304	H	WB,IF-Cell,IHC-P	Rabbit mAb
Cytokeratin 17	ET1602-16	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
Desmin	ET1606-30	H,Ms,R,Z	WB,IF-Cell,IF-Tissue,IHC-P,FC,miHC	Rabbit mAb
E-Cadherin	HA723564	H,Ms,R	WB,IHC-Fr,IHC-P,IF-Cell,FC,IP	Rabbit mAb
E-Cadherin mlHC抗体	IRS030	H	miHC	Rabbit mAb
EDN3	HA500241	H,Ms,R	WB,IF-Cell,IHC-P	Rabbit pAb
EGFR mlHC抗体	IRS046	H	miHC	Rabbit mAb
EpCAM	EM1111	H,Ms	WB,IF-Cell	Mouse mAb
Ephrin B2	ET1705-33	H,Ms,R	WB,IF-Cell	Rabbit mAb
ErbB3/HER3	HA721194	H	IHC-P,IF-Tissue	Rabbit mAb
F4/80	HA721520	Ms,R	WB,IHC-P,IF-Tissue,IHC-Fr,miHC	Rabbit mAb
FAP	ET1704-23	H,Ms,R	WB,IHC-P,miHC,IHC-Fr	Rabbit mAb
FOXP3	ET1702-12	H,Ms,R	WB,IF-Cell,FC,IHC-P	Rabbit mAb
FOXP3 mlHC抗体	IRS008	H	miHC	Rabbit mAb
FOXP3 mlHC抗体	IRS053	Ms	miHC	Rabbit mAb
GFAP	ET1601-23	H,Ms,R,Cmk,P	WB,IHC-P,IF-Tissue,IHC-Fr,miHC,IP	Rabbit mAb
GFAP mlHC抗体	IRS069	Ms	miHC	Rabbit mAb
Granzyme B	HA500252	H	IHC-P,miHC	Rabbit pAb
Granzyme B mlHC抗体	IRS032	H	miHC	Rabbit pAb
HER2 / ErbB2	HA721178	H	IHC-P,WB,IF-Cell,FC,miHC	Rabbit mAb
HER2 / ErbB2 mlHC抗体	IRS034	H	miHC	Rabbit mAb
HLA-ABC (MHC I)	HA723415	H,Ms,R	WB,IF-Cell,IHC-P	Rabbit mAb
Iba1	ET1705-78	H,Ms,R,Cmk,P	WB,IHC-P,IHC-Fr,IF-Tissue,IF-Cell,FC,IP,miHC	Rabbit mAb
ICAM1	ET1609-46	H	WB,IF-Tissue,IHC-P	Rabbit mAb
IDO	HA721331	H	IHC-P,IF-Cell,WB,miHC	Rabbit mAb
IDO mlHC抗体	IRS045	H	miHC	Rabbit mAb
IFNAR1	ET1602-37	H,Ms,R	WB,IHC-P,IF-Cell,FC	Rabbit mAb
IL-1 beta	HA601036	H,Ms,R	WB,ELISA,IHC-P,IF-Tissue	Mouse mAb
IL-17A	ER1902-37	H,Ms,R	WB,IHC-P,FC,miHC	Rabbit pAb
IL-17A mlHC抗体	IRS056	Ms	miHC	Rabbit pAb
IL3RA / CD123	HA500291	H	WB,IF-Cell,IHC-P,FC	Rabbit pAb
IL-4	ET1704-28	H	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
IL-5	HA500081	H	WB,IF-Cell,ELISA	Rabbit pAb
Integrin alpha 5	ET1701-58	H,Ms,Mk,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
Integrin beta 1	ET1601-17	H,Ms,R,Z	WB,IHC-P	Rabbit mAb
Integrin beta 3	ET1606-49	H,Ms	WB,IHC-P,IF-Tissue	Rabbit mAb
Interferon gamma	ET1703-17	H	WB,FC	Rabbit mAb
LAG-3	HA721346	H,Ms	WB,IHC-P,IF-Cell	Rabbit mAb
LAG-3 mlHC抗体	IRS020	H	miHC	Rabbit mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
LAMB3	HA500480	H,Ms,R	WB,IHC-P	Rabbit pAb
LC3B	ET1701-65	H,Ms,R	WB,IF-Cell,IHC-P,IF-Tissue,IP,miHC	Rabbit mAb
Ly6c	HA500088	Ms	WB,IHC-P,FC	Rabbit pAb
Mannose Receptor(CD206)	HA722892	Ms,R	WB,IHC-P,IF-Tissue,IHC-Fr,IF-Cell,IP,miHC	Rabbit mAb
Mannose Receptor(CD206) mlHC抗体	IRS049	Ms	miHC	Rabbit mAb
MAP2 mlHC抗体	IRS071	Ms	miHC	Rabbit mAb
M-CSF	ET1609-1	H,Ms	WB,IHC-P,IF-Cell,IP	Rabbit mAb
MHC class I	ET1702-47	H	WB,IF-Cell,IHC-P,FC,IF-Tissue	Rabbit mAb
MHC Class II	ET1704-13	H	WB,IP,IF-Cell,IF-Tissue,IHC-P,miHC	Rabbit mAb
MUC2	ET1704-06	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
Myosin heavy chain	ET1702-88	H,Ms,R	WB,IHC-P,IF-Tissue	Rabbit mAb
N Cadherin	ET1607-37	H,Ms,R,Cmk,P	WB,IHC-P,IHC-Fr,IF-Tissue	Rabbit mAb
NCAM1 / CD56	HA722755	H,Ms,R,Cmk,P	WB,IHC-P,IHC-Fr,IF-Cell,FC,IF-Tissue	Rabbit mAb
NCAM1 / CD56 mlHC抗体	IRS026	H	miHC	Rabbit mAb
Nestin	HA722919	H,Ms,R	WB,IF-Cell,IHC-P,IHC-Fr,IF-Tissue,miHC,IP	Rabbit mAb
Nestin mlHC抗体	IRS065	Ms	miHC	Rabbit mAb
pan Cytokeratin	HA601138	H	IHC-P,miHC,IF-Cell,IF-Tissue,WB,FC	Mouse mAb
pan Cytokeratin mlHC抗体	IRS010	H	miHC	Mouse mAb
PD1	EM1707-60	H	WB,IF-Cell,IHC-P,FC	Mouse mAb
PDGFR beta	ET1605-20	H,Ms,R	WB,IHC-P,IP,FC,IF-Tissue,IF-Cell,miHC,IHC-Fr	Rabbit mAb
PDGFR beta mlHC抗体	IRS058	Ms	miHC	Rabbit mAb
PDGFR beta mlHC抗体	IRS038	H	miHC	Rabbit mAb
PD-L1	HA721176	H	IHC-P,miHC,WB	Rabbit mAb
PD-L1	HA722184	Ms	WB,IHC-P,miHC	Rabbit mAb
PD-L1 mlHC抗体	IRS059	Ms	miHC	Rabbit mAb
S100A4	ET1612-13	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
SQSTM1 / p62	HA721171	H,Ms,R,Cmk,P	WB,IHC-P,IF-Cell,FC,IF-Tissue,IHC-Fr	Rabbit mAb
TBR1	ET1702-97	H,Ms,R,Cmk,P	WB,IHC-P,IF-Tissue,miHC,IHC-Fr	Rabbit mAb
TBR1 mlHC抗体	IRS070	Ms	miHC	Rabbit mAb
TIM 3	HA723169	H	WB,IF-Cell,FC,IP	Rabbit mAb
TNF alpha	HA722022	H,Ms	WB	Rabbit mAb
H TNF alpha mlHC抗体	IRS040	H	miHC	Rabbit mAb
TNF Receptor II	ET1703-63	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC,IP,IHC-Fr	Rabbit mAb
Wilms Tumor Protein	ET1610-45	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,miHC	Rabbit mAb
Wilms Tumor Protein mlHC抗体	IRS072	Ms	miHC	Rabbit mAb

*H: Human; Ms: Mouse; R: Rat; Mk: Monkey; Cmk: Cynomolgus monkey; P: Pig; Z: Zebrafish

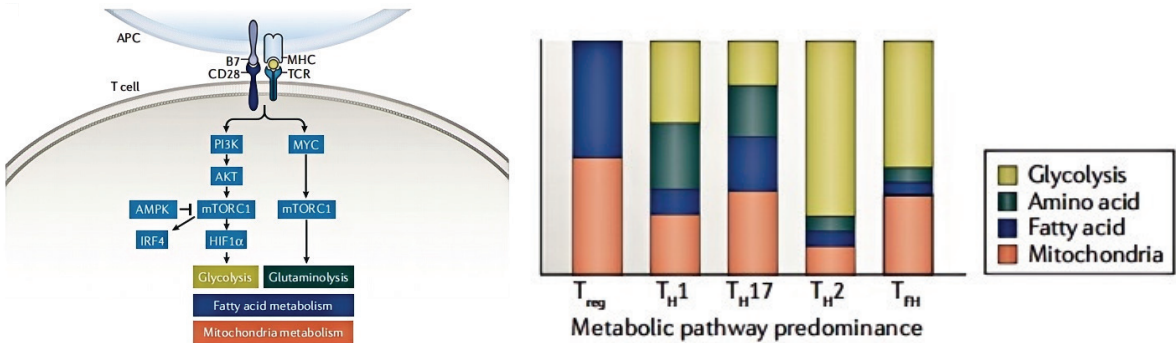
代谢-免疫调控研究中TBNK细胞的关键通路检测方案

免疫细胞的代谢重编程与其功能状态密切相关，TBNK细胞在不同激活状态下表现出显著的代谢差异。而其代谢中间产物又可作为信号分子直接调节免疫细胞的分化和功能。

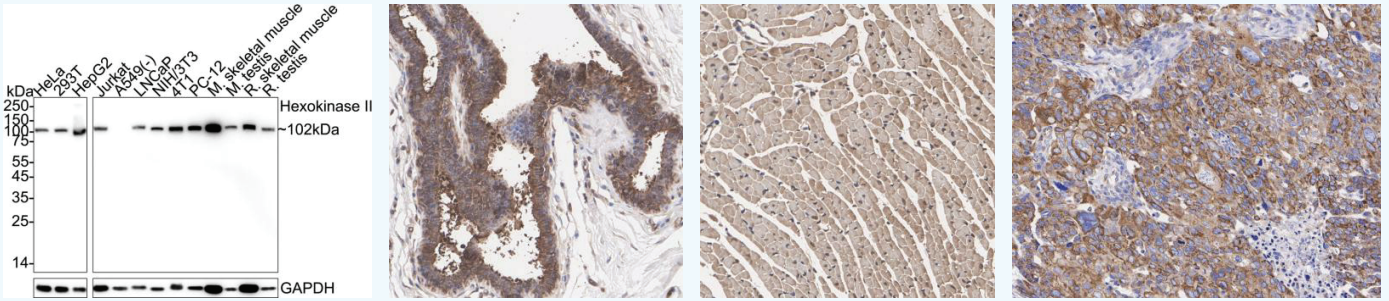
免疫细胞亚群	主要代谢特征	关键调控分子	热销产品推荐
效应T细胞(Teff)	高糖酵解，低氧化磷酸化	HK2、PKM2、LDHA	HK2 rabbit mAb HA723033
			PKM2 rabbit mAb HA723370
			LDHA rabbit mAb HA723547
记忆T细胞(Tmem)	高脂肪酸氧化，线粒体代谢增强	CPT1a、PDK1	CPT1A rabbit mAb HA722081
			PDK1 rabbit mAb ET1704-66
调节性T细胞(Treg)	依赖脂肪酸氧化和谷氨酰胺代谢	ACC1、ACLY、IDO	Phospho-ACC (S79) rabbit mAb HA722801
			IDO rabbit mAb HA721331
CD56 ^{bright} NK细胞	高糖酵解，低线粒体依赖	GLUT1/3、ENO1/2	GLUT1 rabbit mAb ET1601-10
			GLUT3 rabbit mAb ET1704-59
			ENO1 rabbit mAb ET1705-56
CD56 ^{dim} NK细胞	平衡的糖酵解和氧化磷酸化	mTOR、AMPK	mTOR rabbit mAb ET1608-5
			AMPK alpha 1 rabbit mAb ET1608-40
活化B细胞	高糖酵解和谷氨酰胺代谢	c-Myc、HIF-1α	c-Myc rabbit mAb HA721182
			HIF-1 alpha rabbit mAb HA721997

TBNK细胞主要亚群的代谢特征与调控靶点

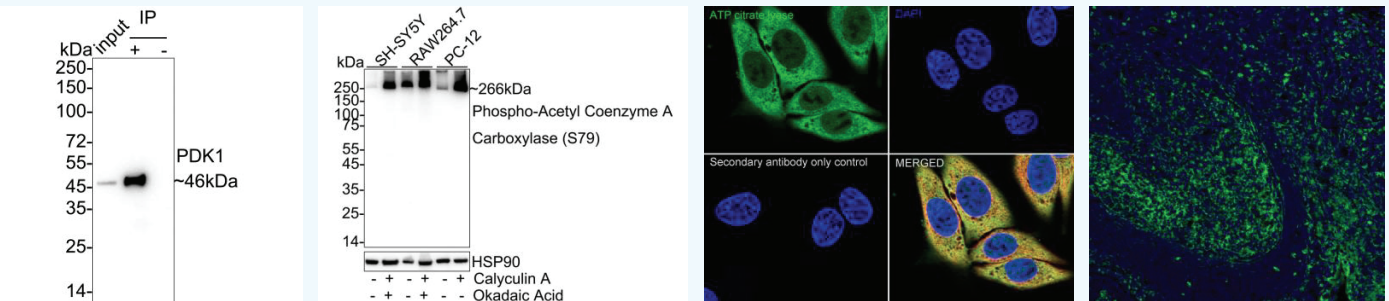
在活化的CD4⁺和CD8⁺T细胞经历Warburg效应，即使在有氧条件下仍增强糖酵解，以满足快速增殖和细胞因子（如IFN-γ、TNF-α）分泌的能量需求。**记忆T细胞（Tmem）**主要依赖**脂肪酸氧化（FAO）和线粒体代谢**，具有更高的代谢灵活性，可在营养缺乏环境下长期存活。**调节性T细胞（Treg）**偏好脂质代谢，特别是**脂肪酸合成（FAS）和氧化**，维持其免疫抑制功能。抑制糖酵解可增强Treg的稳定性。



T免疫细胞的代谢需求示意图 (PMID: 31949287)

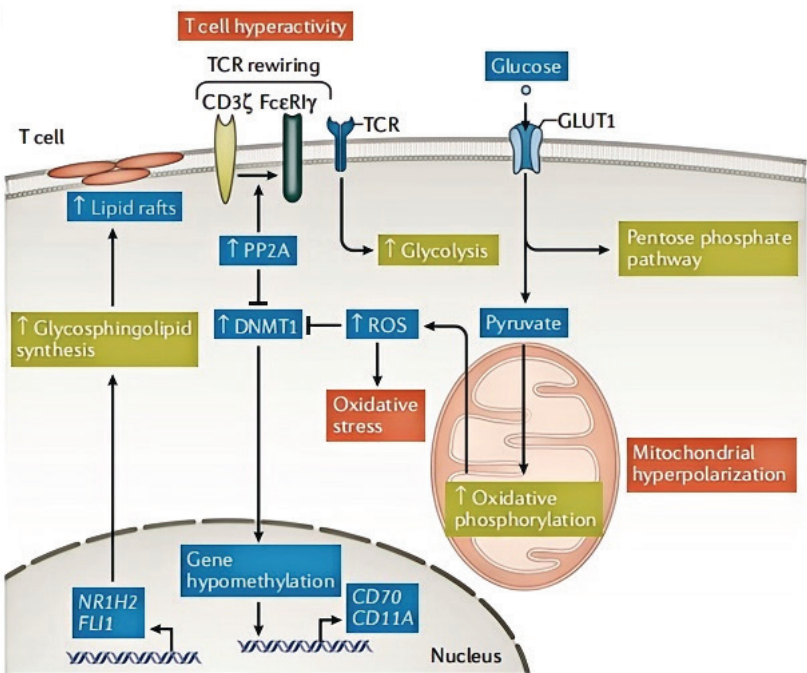


HK2 兔单抗 | HA723033 不同样本裂解液 WB 分析 (1/2,000 dilution) PKM2 兔单抗 | HA723370 人乳腺癌组织 IHC-P 分析 (1/1,000 dilution) LDHA 兔单抗 | HA723547 小鼠心肌组织 IHC-P 分析 (1/5,000 dilution) CPT1A 兔单抗 | HA722081 人卵巢癌组织 IHC-P 分析 (1/2,000 dilution)

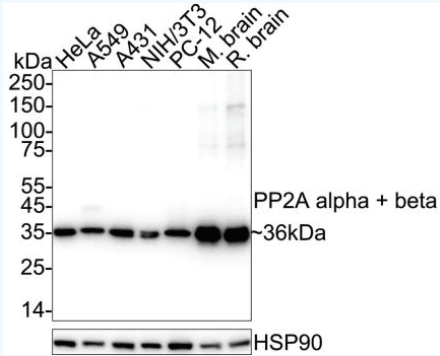


PDK1 兔单抗 | ET1704-66 HeLa细胞裂解液 IP 分析 (1/2,000 dilution) Phospho-ACC (S79) 兔单抗 | HA722801 不同样本裂解液 WB 分析 (2 μg/25 μl agarose) ACLY 兔单抗 | ET1609-37 HeLa细胞 IF-Cell 分析 (1/1,000 dilution) IDO 兔单抗 | HA721331 人扁桃体组织 mIHC 分析 (1/1,000 dilution)

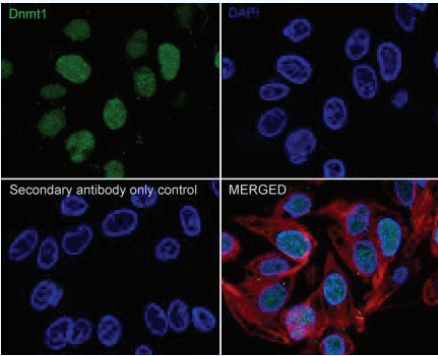
然而，在自身免疫性疾病中，如系统性红斑狼疮（SLE），T细胞的多条代谢通路异常可导致慢性细胞活化状态和氧化应激，同时伴随mTORC1活性增强。



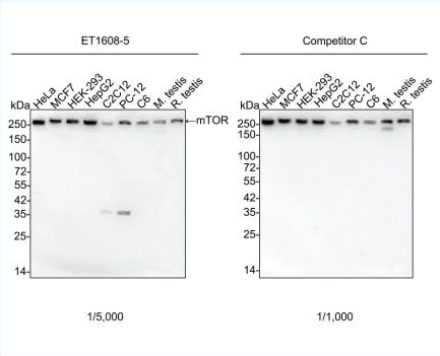
T免疫细胞在系统性红斑狼疮（SLE）中代谢通路示意图 (PMID: 31949287)



PP2A alpha + beta 兔单抗 | ET1611-54
不同样本裂解液 WB 分析 (1/2,000 dilution)

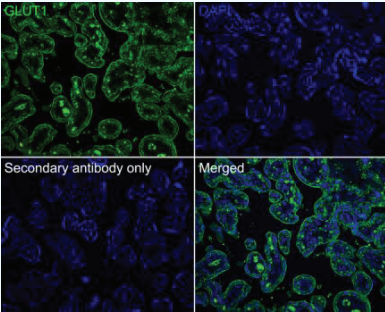


Dnmt1 兔单抗 | ET1702-77
HepG2细胞 IF-Cell 分析 (1/100 dilution)

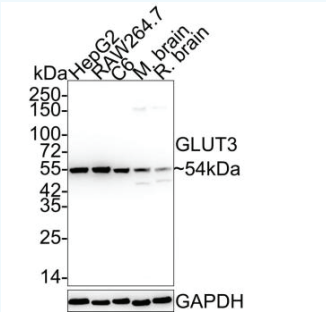


mTOR 兔单抗 | ET1608-5
不同样本裂解液 WB 分析 (1/5,000 dilution)

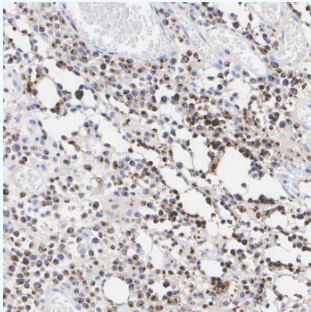
静息状态下，外周血NK细胞（pbNK）依赖OXPHOS，但激活后迅速转向糖酵解，增加葡萄糖和氨基酸转运体SLC2A1、CD98和CD71的表达水平，但会下调OXPHOS。组织驻留NK细胞（trNK），如肺trNK（CD56^{bright} CD16⁻ CD49a⁺ CD69⁺）表现出更强的糖酵解能力，依赖葡萄糖转运蛋白（GLUT1/3）维持功能（PMID: 39378091）。



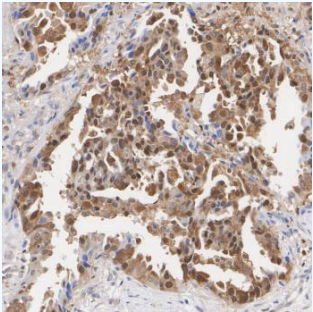
GLUT1 兔单抗 | ET1601-10
人胎盘组织 IF-tissue 分析 (1/500 dilution)



GLUT3 兔单抗 | ET1704-59
不同样本裂解液 WB 分析 (1/5,000 dilution)

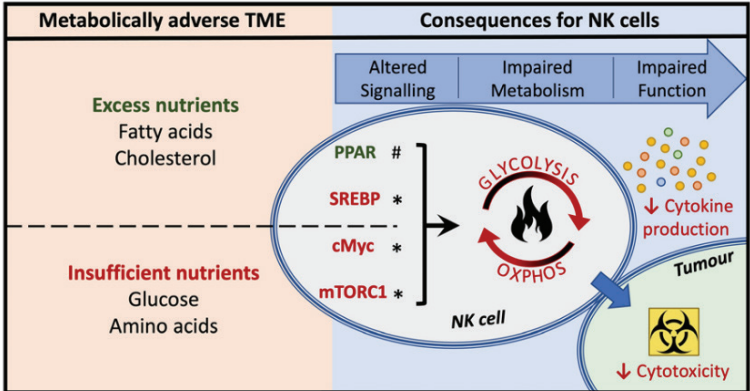


Granzyme B 兔单抗 | HA723664
人NK/T细胞淋巴瘤组织 IHC-P 分析 (1/5,000 dilution)

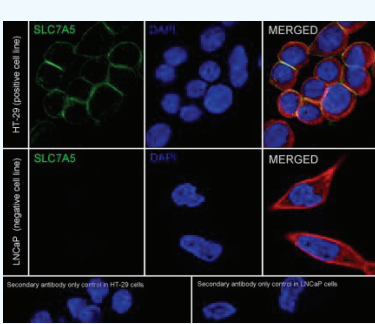


ENO1 兔单抗 | ET1705-56
人肺癌组织 IHC-P 分析 (1/1,000 dilution)

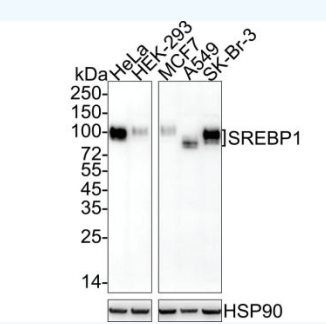
目前，许多基于NK细胞的免疫疗法侧重于促进NK细胞的细胞毒性。但是由于NK细胞代谢受到许多信号通路的调控，使得疗效仍然有限。尤其是，肿瘤快速扩增会营造复杂的TME环境，改变NK细胞的代谢机制，以及TME与免疫细胞代谢之间的关系，最终会导致NK细胞衰竭。



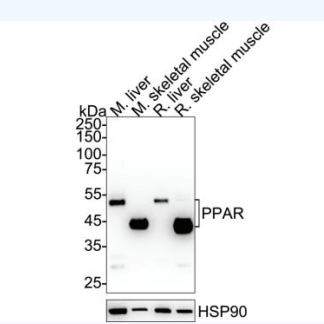
肿瘤微环境中NK细胞代谢改变示意图（PMID: 34090499）



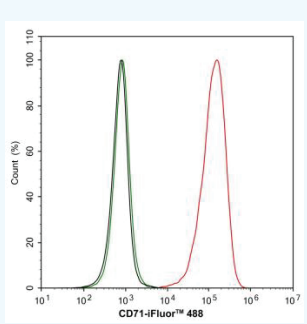
SLC7A5 兔单抗 | HA723086
HT-29 (阳性)和LNCaP (阴性)细胞 IF-Cell 分析 (1/100 dilution)



SREBP1 兔单抗 | HA722160
不同样本裂解液 WB 分析 (1/2,000 dilution)



PPAR 兔多抗 | HA500569
不同样本裂解液 WB 分析 (1/5,000 dilution)



CD71 兔单抗 | HA723545
K-562组细胞 FC 分析 (1/1,000 dilution)

特色产品推荐

Product name	Catalog#	Reactivity	Tested applications	Antibody type
ACE	ET1705-36	H,Ms,R	WB,IHC-P,FC	Rabbit mAb
Acetyl CoA Carboxylase 1 (ACC1)	ET1609-77	H,Ms,R	WB,IHC-P	Rabbit mAb
Aconitase 2	ET7109-15	H,Ms,R	WB,IF-Cell,IHC-P,IF-Tissue	Rabbit mAb
ACSL1	HA601112	H,Ms,R	WB,IHC-P	Mouse mAb
ACSL4/FACL4	ET7111-43	H,Ms,R	WB,IHC-P	Rabbit mAb
ADAM17	ET1703-06	H,Ms,R,Cmk,P	WB,IF-Cell,IF-Tissue,FC,IP,IHC-Fr,IHC-P	Rabbit mAb
ADFP / PLIN2	ET1704-17	H,Ms,R	WB,IF-Cell,IF-Tissue,FC,IHC-P	Rabbit mAb
Adipose Triglyceride Lipase	HA721951	H,Ms,R	WB,IHC-P,IF-Tissue	Rabbit mAb
ADX	HA721329	H,Ms,R	WB,IHC-P,IF-Cell	Rabbit mAb
Albumin	ET1702-55	H,Ms,R,Cw	WB,IHC-P,mIHC,IF-Tissue	Rabbit mAb
Apolipoprotein A1	ET1702-23	H	WB,IF-Cell,IF-Tissue,IHC-P,IP	Rabbit mAb
Apolipoprotein E	ET1610-22	H,R	WB,IF-Cell,IF-Tissue,IHC-P,IP	Rabbit mAb
AQP1	ET1703-34	H,Ms,R,Cmk,P	WB,IF-Tissue,IHC-P,mIHC	Rabbit mAb
Aromatase	ET1703-77	H,R	WB,IP	Rabbit mAb
ATP citRe lyase	ET1609-37	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC,IP	Rabbit mAb
ATP5A1	ET1703-53	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
ATPB	ET1703-29	H,Ms,R,Z	WB,IF-Cell,IF-Tissue,IHC-P,IP	Rabbit mAb
BMAL1	ET1705-5	H,Ms,R	WB,IF-Cell	Rabbit mAb
BNIP3	ET1704-08	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
Calmodulin	ET1606-46	H,Ms,D,R	WB,IF-Cell,IF-Tissue,IHC-P,IP	Rabbit mAb
Calpain 2	ET1704-90	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit mAb
CaMKII alpha	ET1703-54	H,Ms,R,Cmk,P	WB,IHC-P,IF-Tissue,IHC-Fr,IF-Cell,FC,IP	Rabbit mAb
CaMKII	ET1608-47	H,Ms,R,Cmk,P	WB,IF-Cell,IF-Tissue,IHC-P,IHC-Fr,FC	Rabbit mAb
Carbonic anhydrase 9	ET1701-51	H	WB,IHC-P,IF-Tissue,mIHC	Rabbit mAb
Catalase	ET1703-31	H,Ms,R,Z	WB,IHC-P,IF-Cell	Rabbit mAb
CaV2.3 / CACNA1E	HA723540	Ms,R	IHC-Fr,IHC-P,WB	Rabbit mAb
Caveolin-1	ET1603-1	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
CBS	ET7109-21	H	WB,IF-Cell	Rabbit mAb
CCK4	HA601344	H,Ms,R,Mk	WB,IF-Cell	Mouse mAb
CD36	ET1701-24	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC,IP	Rabbit mAb
CD38	HA721268	H	WB,IHC-P,IF-Cell,FC,mIHC,IF-Tissue	Rabbit mAb
CD39	ET1704-74	H,Ms,R	WB,IHC-P	Rabbit mAb
CD73	HA601011	H,Ms,R	WB,IHC-P,IF-Tissue,FC,IF-Cell	Mouse mAb
CD98	HA601125	H	WB,IHC-P	Mouse mAb
COX IV	ET1701-63	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
COX1/Cyclooxygenase 1	ET1610-98	H,Ms,R	WB,IF-Cell,IHC-P,FC,IP	Rabbit mAb
COX2/Cyclooxygenase 2	ET1610-23	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
COX5B	HA500163	H,R	WB,IHC-P	Rabbit pAb
CPS1	ET7107-69	H,Ms,R	WB,IF-Cell,IHC-P,IP	Rabbit mAb
CPT1A	HA722081	H,Ms	WB,IHC-P,IP	Rabbit mAb
CPT2	ET1611-64	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
Creatine kinase B type	ET7107-52	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
CREBBP	HA500056	H,Ms,R	WB,IHC-P	Rabbit pAb
CXCR4	HA722304	H	WB,IF-Cell,IHC-P	Rabbit mAb
CYB5R3	HA721008	H	WB,IHC-P	Rabbit mAb
CYP17A1	ET7107-61	H,Ms,R	WB,IHC-P,IF-Tissue	Rabbit mAb
CYP27A1	ET7109-05	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit mAb
CYP2E1	ET1703-48	H,Ms,R	WB,IF-Tissue,IHC-P	Rabbit mAb
Cytochrome C	ET1610-60	H,Ms,R	WB,IF-Tissue,IHC-P,IP,IF-Cell	Rabbit mAb
Cytochrome P450 Reductase	ET7107-35	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
DARPP32	ET1608-23	H,Ms,R,Cmk,P	WB,IHC-P,IHC-Fr,IF-Tissue	Rabbit mAb
DDIT3	ET1703-05	H,Ms,R	WB,IHC-P,FC	Rabbit mAb
eIF4EBP1	ET1701-83	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP	Rabbit mAb
ENO1	ET1705-56	H,Ms,R,Z	WB,FC,IF-Tissue,IHC-P,IF-Cell	Rabbit mAb
FABP4	ET1703-98	H,Ms,R	WB,IF-Cell,IHC-Fr	Rabbit mAb
Fatty Acid Synthase	ET1701-91	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
FBP1	ET7109-82	H,Ms,R	WB,IF-Cell,IHC-P	Rabbit mAb
Ferritin Heavy Chain	ET1610-78	H,Ms,Z,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
Ferritin Light Chain	ET1705-54	H,Ms,R	WB,IHC-P,IP	Rabbit mAb
FGF21	ET1704-04	H,Ms,R	WB,IHC-P,IF-Tissue	Rabbit mAb
FIP200	HA601106	H,Ms,R	WB,IHC-P,IF-Cell,FC	Mouse mAb
FOXA2	ET1703-76	H,Ms,R,Cmk,P	WB,IF-Cell,IHC-P,IHC-Fr	Rabbit mAb
FOXO1A	ET1608-25	H,Ms,R,Z	WB,IF-Cell,IHC-P,FC	Rabbit mAb
FumaRe hydRase	HA723032	H,Ms,R	WB,IHC-P,IF-Cell,FC	Rabbit mAb
GCLM	ET1705-87	H,Ms,R	WB,IF-Tissue,IHC-P,IP,IHC-Fr	Rabbit mAb
Ghrelin	HA723029	H,Ms	IHC-P,IHC-Fr	Rabbit mAb
GLB1 / Beta-galactosidase	HA500021	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit pAb
Glucose Transporter GLUT1	ET1601-10	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
Glucose Transporter GLUT3	ET1704-59	H,Ms,R	WB,FC	Rabbit mAb
Glucose Transporter GLUT4	HA723175	Ms,R	WB,IHC-Fr	Rabbit mAb
GLUT2	ET1701-34	H,Ms,R	WB,IHC-P,FC	Rabbit mAb
Glutaminase	ET1611-5	H,R,Ms	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
Glutathione Peroxidase 1	ET1701-84	H,Ms,R	WB,IP	Rabbit mAb
Glycogen synthase 1 / GYS1	ET1611-59	H,Ms,R	WB,IF-Tissue,IHC-P,IP	Rabbit mAb
GNB3	HA500127	H,Ms,R	WB,IF-Cell,IHC-P	Rabbit pAb
GPX4	ET1706-45	H,Ms,R,Z,P,Cmk	WB,IHC-P,IF-Cell,FC	Rabbit mAb
GRP94	M1701-12	H,Ms,R	WB,IHC-P	Mouse mAb
Heme Oxygenase 1 (HO-1)	HA721854	H,Ms	WB,IF-Cell,IHC-P	Rabbit mAb
Hexokinase 1	ET1609-28	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
Hexokinase II	HA500186	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit pAb
HIF-1 alpha	HA721997	H,Ms,R	WB,IF-Cell	Rabbit mAb
HIF-2 alpha	ET7107-32	H,Ms,R	WB,IHC-P,FC,IF-Cell	Rabbit mAb
HMGCR	ET1702-41	H,Ms,R	WB,IP,IHC-P	Rabbit mAb
HNF-4-alpha	ET1611-43	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit mAb
Hormone sensitive lipase / HSL	HA722810	H,Ms,R	WB,IHC-P,IP	Rabbit mAb
HSD3B1	HA500082	H	WB,IF-Cell,IHC-P	Rabbit pAb
IDH1	HA722696	H,Ms,R	WB,IHC-P,IP	Rabbit mAb
IDH2	ET1704-93	H,Ms,R	WB,IHC-P,FC	Rabbit mAb
IDO	HA721331	H	IHC-P,IF-Cell,WB,mIHC	Rabbit mAb
IFNGR2	HA500246	H,Ms,R	WB,IF-Cell,IHC-P,IF-Tissue	Rabbit pAb
IGF2BP2	HA720003	H,R	WB	Rabbit mAb
Insulin Receptor R	ET1705-22	H,Ms,R	WB,IHC-P	Rabbit mAb
Insulin	ET1601-12	H,Ms,R	IF-Cell,IF-Tissue,IHC-P,mIHC,IHC-Fr,WB	Rabbit mAb
Integrin alpha 2	ET1611-57	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC,IP	Rabbit mAb
IP3 Receptor	ET1704-77	H,Ms,R	WB,IHC-P,IHC-Fr,IF-Tissue	Rabbit mAb
KAT3B / p300	HA723737	H,Ms,R,Mk	WB,IF-Cell	Rabbit mAb
ketohexokinase	HA721949	H,Ms	WB,IF-Cell,IHC-P,FC	Rabbit mAb
KRAS	HA601059	H,Ms,R	WB,IF-Cell,IHC-P,FC	Mouse mAb
Lactate Dehydrogenase	ET1608-57	H,Ms,R,Z	WB,IF-Cell,IF-Tissue,IHC-P,FC,IP	Rabbit mAb
LDHA	HA723547	H,Ms,R	WB,IHC-P,IF-Cell,FC	Rabbit mAb
LDL Receptor	ET1606-47	H,R	WB,IF-Cell,FC	Rabbit mAb
Leptin Receptor	ET1704-44	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit mAb
LIAS	HA722085	H,Ms,R	WB,IF-Cell	Rabbit mAb
Lipocalin-2	ET1703-39	H	WB,IF-Tissue,IHC-P	Rabbit mAb
Lipoprotein lipase	ET1704-48	H	WB,IHC-P	Rabbit mAb
Liver Arginase	HA723143	H,Ms,R	WB,IHC-P,IF-Tissue	Rabbit mAb
LRP1	ET1601-1	H,Ms,R	WB,IF-Tissue,IHC-P,IP,IHC-Fr	Rabbit mAb
LSS	HA500011	H,Ms	WB,IHC-P	Rabbit pAb
LXR alpha	ET1704-51	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
Lysophospholipase 1	ET7109-63	H,Ms,R	WB,IF-Cell,IHC-P	Rabbit mAb
MAN2A1	HA721845	H,Ms,R	WB,IHC-P,FC	Rabbit mAb
MCT1	HA500190	H	WB,IF-Cell,IHC-P,FC	Rabbit pAb
MDH2	HA721043	H,Ms,R	WB,IHC-P	Rabbit mAb
Mitofilin	HA721636	H,Ms,R	WB,IHC-P,IF-Cell,IF-Tissue	Rabbit mAb
Mitofusin 2	HA720073	H,Ms,R	WB	Rabbit mAb
MTCO1	HA722838	H,Ms,R	WB,IF-Cell,IHC-P,FC,IF-Tissue	Rabbit mAb
MTCO2	ET1610-72	H	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
mTOR	ET1608-5	H,Ms,R	WB,IHC-P,IP,IF-Cell	Rabbit mAb
Myeloperoxidase	EM1901-19	H,Ms,R	WB,IHC-P,FC,IF-Cell,IF-Tissue	Mouse mAb
NDUFB8	ET7108-25	H,Ms,R	WB,IP,IHC-P,IF-Cell	Rabbit mAb
NDUFS2	HA721079	H,Ms,R	WB,IHC-P	Rabbit mAb
NDUFS3	ET1706-07	H	WB,IHC-P,IF-Cell,IF-Tissue,IP	Rabbit mAb
NeuroD1	ET1703-73	H,Ms,R,Cmk,P	WB,IP,IHC-P,IHC-Fr	Rabbit mAb
NFAT1	ET1704-14	H	WB,IF-Tissue,IHC-P	Rabbit mAb
NOX2 / gp91phox	ET1611-44	H,Ms,R	WB	Rabbit mAb
NQO1	ET1702-50	H,Ms,R	WB,IP,FC,IHC-P	Rabbit mAb
NSDHL	HA721088	H	WB,IF-Cell,IHC-P	Rabbit mAb
NSE	ET1610-96	H,Ms,R,Z	WB,IF-Cell,IHC-P	Rabbit mAb
OGT	ET7107-17	H,Ms,R	WB,IF-Cell,IHC-P,FC,IP	Rabbit mAb
Osteoprotegerin	EM1701-98	H,Ms,R	WB,IHC-P,IF-Cell	Mouse mAb
p23	ET1706-43	H,Ms,R	WB,IF-Cell,IHC-P,IP	Rabbit mAb
p47-phox	HA600049	H,Ms	WB,IF-Cell,IHC-P,FC	Mouse mAb
P4HB	ET7110-92	H,Ms,R,Mk	WB,IF-Cell,IHC-P,FC	Rabbit mAb
PADI4	HA721657	H,Ms,R	WB,IHC-P	Rabbit mAb
PAI1	HA601152	H,Ms,R	WB,IHC-P,IF-Tissue,FC	Mouse mAb
PBR	ET1601-19	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
PCK2	ET7107-29	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
PCSK9	EM1701-26	H,Ms	WB,IHC-P,IF-Cell,FC	Mouse mAb
PDHA1	ET1702-75	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
PDK1	ET1704-66	H,Ms,R	WB,IHC-P,IP,FC,IF-Tissue	Rabbit mAb
PERK	HA500326	H	WB	Rabbit pAb
Peroxiredoxin 2	ET1701-61	H,Ms,R	WB,IF-Tissue,IHC-P	Rabbit mAb
PFKFB3	ET1705-66	H,Ms,R	WB,IF-Cell,IHC-P,FC,IP,IF-Tissue	Rabbit mAb
PFKM	ET7106-97	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
PFKP	HA500472	H,Ms,R	WB,IHC-P	Rabbit pAb
PGC1 alpha+beta	ET1702-96	H,Ms,R	WB	Rabbit mAb
PGC1 beta	ET1705-65	H,R	WB,IP,FC	Rabbit mAb
Phospho-Acetyl Coenzyme A Carboxylase (S79)	HA722801	H,Ms,R	WB,IF-Cell,IHC-P	Rabbit mAb
Phospho-CaMKII (T286)	HA721794	H,Ms,R	WB	Rabbit mAb
Phospho-CDK (Y15)	HA723107	H,Ms	WB,IHC-P	Rabbit mAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
Phospho-DRP1 (S616)	HA722760	H,Ms,R	WB,IHC-P,IF-Tissue,IF-Cell,FC	Rabbit mAb
Phospho-eIF4EBP1 (T70)	HA723222	H,Ms	WB,IHC-P,IP	Rabbit mAb
Phospho-FOXO1A (T24)+ FOXO3A (T32)+ FOXO4 (T28)+ FOXO6 (T26)	HA722499	H,Ms	WB,IF-Cell,FC	Rabbit mAb
Phospho-Hormone sensitive lipase (S853)	ET1611-19	H,Ms,R	WB,IHC-P	Rabbit mAb
Phospho-mTOR (S2448)	HA600094	H,Ms,R	WB,IHC-P	Mouse mAb
PKM2	HA723370	H,Ms,R,Mk	WB,IF-Cell,IHC-P,FC,IP	Rabbit mAb
PLC-gamma-1	ET1611-25	H,Ms,R	WB,IF-Cell,IHC-P,IP	Rabbit mAb
PLGF	EM1701-88	H,Ms,R	WB,IHC-P,IF-Cell	Mouse mAb
PMP70	HA721969	H,Ms,R	WB,IF-Cell,IHC-P,FC	Rabbit mAb
PON2	ET7108-19	H,Ms,R	WB,IHC-P,IP	Rabbit mAb
PP1C gamma	HA500138	H,Ms,R	WB,IHC-P,IF-Cell,FC	Rabbit pAb
PPAR	HA500569	Ms,R	WB	Rabbit pAb
PTGER2	HA721380	H,Ms,R	WB,IHC-P,FC,IF-Cell	Rabbit mAb
PUMA	ET1602-24	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
PYK2	ET1610-82	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P	Rabbit mAb
Pyruvate Dehydrogenase E2	HA721267	H,Ms,R	WB,IHC-P,IF-Cell	Rabbit mAb
Retinoid X Receptor alpha	ET7108-99	H,R,Ms	WB,IF-Cell,IHC-P,IP	Rabbit mAb
SDHA	ET1703-40	H,Ms,R,Z	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
SDHB	HA722901	H,Ms,R	WB,IHC-P,IP,IF-Cell	Rabbit mAb
SESN1	HA722307	H	WB,IF-Cell,IHC-P,FC	Rabbit mAb
SLC16A3 / MCT 4	HA722766	H,Mk	WB,IF-Cell,IHC-P,FC	Rabbit mAb
SLC40A1	HA601178	H	WB	Mouse mAb
SPHK1	ET1704-76	H,Ms	WB	Rabbit mAb
SREBP1	HA500210	H,Ms	WB,IF-Cell,IHC-P	Rabbit pAb
Stromal interaction molecule 1	ET1612-53	H,Ms,R	WB,IHC-P,IP	Rabbit mAb
Superoxide Dismutase 1	ET1702-36	H,Ms,R,Cmk,P	WB,IF-Cell,IHC-P,FC	Rabbit mAb
Syndecan 1	ET1703-42	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
TCF-4 / TCF7L2	ET1610-73	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
Tissue type plasminogen activator	ET1702-19	H,Ms,R	WB,IHC-P	Rabbit mAb
TNF alpha	HA722022	H,Ms	WB	Rabbit mAb
TOMM20	ET1609-25	H,Ms,R	WB,IHC-P,IF-Tissue,IF-Cell,FC,IP	Rabbit mAb
Transferrin Receptor (CD71)	HA723545	H,Ms,R	WB,IF-Cell,IHC-P,FC,IP,IF-Tissue	Rabbit mAb
Tryptophan Hydroxylase 1 (TPH1)	ET1610-37	H,Ms,R,Cmk,P	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
TSH	HA601072	H,R	IHC-P,IF-Tissue	Mouse mAb
Tuberin	ET1610-10	H,Ms,R	WB,IHC-P,FC	Rabbit mAb
TXNIP	ET1705-72	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,FC	Rabbit mAb
TXNRD1	ET1704-81	H,Ms,R	WB,IF-Cell,IHC-P,IP,FC	Rabbit mAb
Tyrosinase	ET1704-18	H,Ms	WB,IF-Cell,IF-Tissue,IHC-P,IP,FC	Rabbit mAb
Tyrosine Hydroxylase	ET1611-12	H,Ms,R,Cmk	WB,IF-Cell,IHC-P,FC,IF-Tissue,mIHC,IHC-FRabbit mAb	
UBC9	ET1610-21	H,Ms,R	WB,IF-Cell,IF-Tissue,IHC-P,IP	Rabbit mAb
UCP1	HA500118	H,Ms,R	WB,IHC-P	Rabbit pAb

Product name	Catalog#	Reactivity	Tested applications	Antibody type
UCP1	HA723776	Ms,R	WB,IHC-Fr,IHC-P	Rabbit mAb
Urokinase	HA500429	H,R	WB,IF-Cell	Rabbit pAb
Urokinase	ET1703-26	H,Ms,R	WB,IHC-P	Rabbit mAb
VDAC1	ET1601-20	H,Ms,R	WB,IF-Cell,IHC-P,FC,IF-Tissue	Rabbit mAb
VPS34	ET1607-74	H,Ms,R	IHC-P,FC	Rabbit mAb
xCT/SLC7A11	HA600098	H,Ms	WB,IF-Cell,IHC-P,FC	Mouse mAb

*H: Human; Ms: Mouse; R: Rat; Mk: Monkey; Cmk: Cynomolgus monkey; P: Pig; Z: Zebrafish; Cw: Cow; D: Dog



客户文献引用案例

Case 1

标题：Prostate Cancer Cells Secrete PD-1 in Exosomes to Enhance Myeloid- 1 Derived Suppressor Cell Activity and Promote Tumor Immune Evasion

PMID：40698651

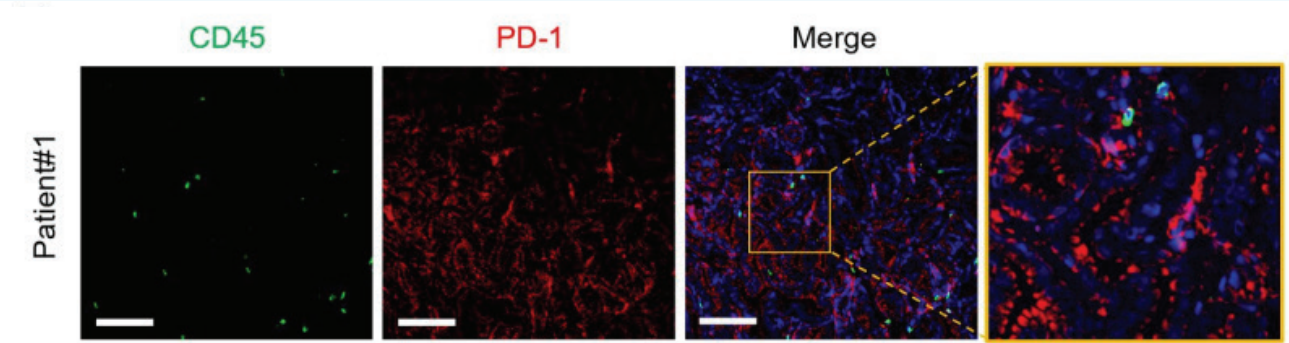
IF：16.6

期刊：Cancer Res. 2025 Jul 23.

产品名称：CD45 Rabbit mAb | ET7111-03; PD1 Mouse mAb | EM1707-60

应用：Double immunofluorescence staining analysis of PCa postoperative specimens. Scale bars:100 μm

科研单位：浙江大学医学院附属邵逸夫医院



客户文献引用案例

Case 2

标题：Inhibiting autophagy selectively prunes dysfunctional tumor vessels and optimizes the tumor immune microenvironment

PMID：39744218

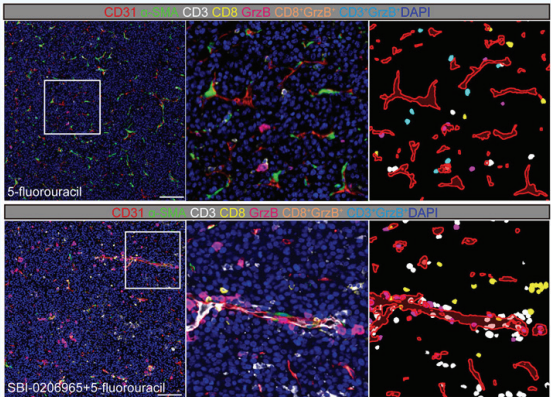
IF：13.3

期刊：Theranostics. 2025 Jan 1;15(1):258-276.

产品名称：CD3 Rabbit mAb | HA720082; Granzyme B Rabbit mAb | HA500252; α-SMA Rabbit mAb | ET1607-53

应用：mIHC staining of indicated proteins in tumors

科研单位：四川大学



Case 3

标题：Engineered cell membrane vesicles loaded with lysosomophilic drug for acute myeloid leukemia therapy via organ-cell-organelle cascade-targeting

PMID：39778270

IF：12.9

期刊：Biomaterials. 2025 Jun:317:123091.

产品名称：CD33 Rabbit mAb | HA721826; CD123 Rabbit pAb | HA500291

应用：IF-Cell staining of indicated proteins in various cells

科研单位：重庆医科大学

