



Tumor Dissociation Kit, mouse

Preservation of cell surface epitopes

Background

The Tumor Dissociation Kit, mouse (# 130-096-730), enables the gentle dissociation of tumor tissue, resulting in viable, functional single cells. The dissociation process involves enzymatic digestion steps. Here we tested whether the three enzymes used for enzymatic digestion affect the integrity of cell surface epitopes on the treated cells. Preservation of cell surface epitopes is essential for several downstream applications such as cell separation, flow analysis, and sorting. Our results show that the vast majority of more than 200 epitopes tested is well preserved during enzymatic treatment.

Method

Mouse lungs and spleens were non-enzymatically dissociated and mixed with mouse blood and mouse tumor cell lines (4T1, CT26.WT and B16-F10). Subsequently, they were either treated with the Tumor Dissociation Kit enzymes or incubated in buffer without enzymes (40 min at 37 °C). The cells that were incubated without enzymes were stained with a cell trace dye. The enzymatically treated and untreated samples were then mixed and stained with each of the fluorochrome-conjugated MACS® Antibodies detecting cell surface epitopes and analyzed by flow cytometry. The cell trace dye enabled the distinction between treated and untreated cells. A decrease in fluorescence signal intensity of the fluorochrome conjugates on the treated cells indicated effects on epitope integrity.

Results

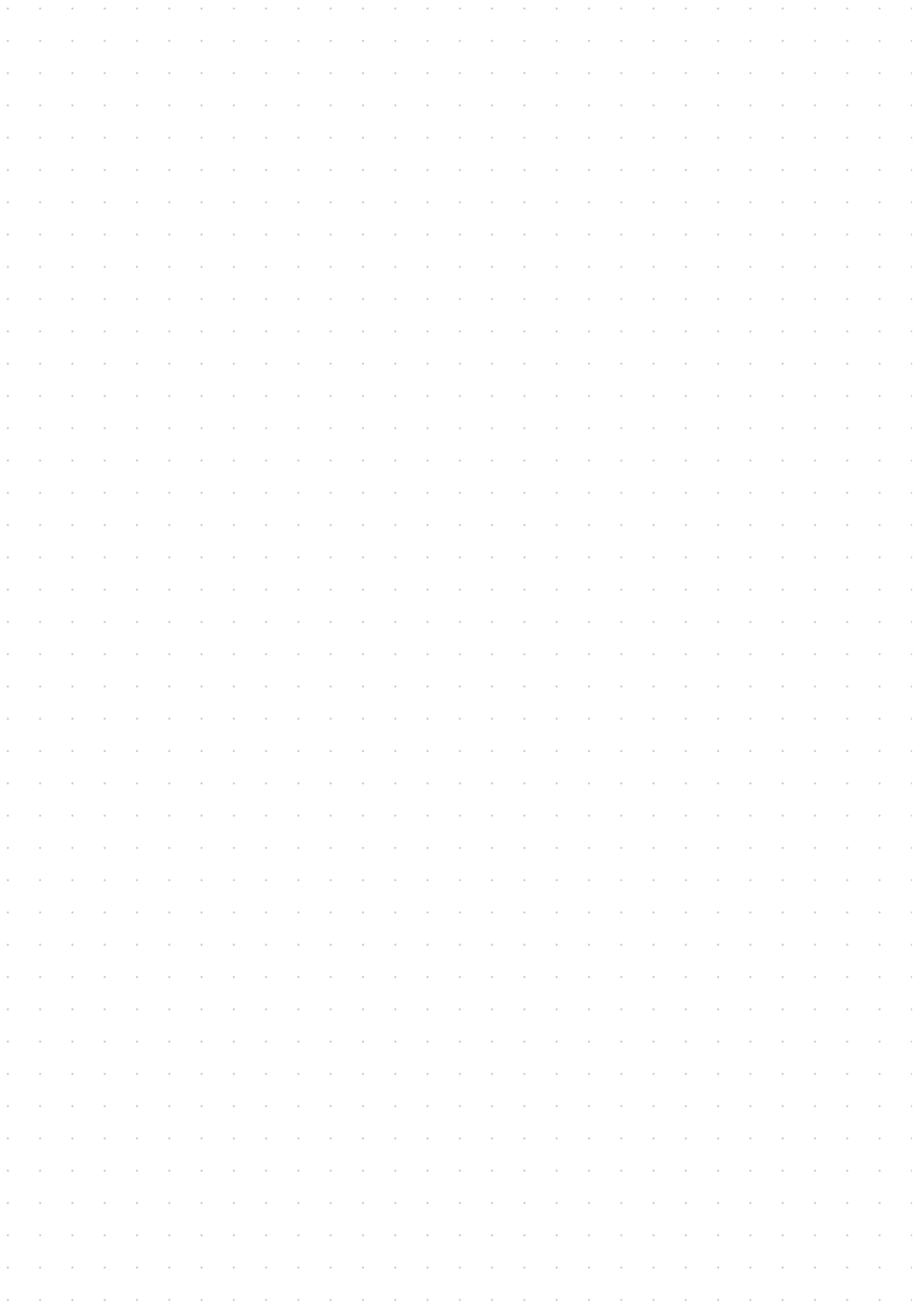
Antibody detecting cell surface epitope	Antibody clone	Antibody detecting cell surface epitope	Antibody clone	Antibody detecting cell surface epitope	Antibody clone	Antibody detecting cell surface epitope	Antibody clone
Anti-A2B5	105HB29	Anti-GITR (CD357)	DTA-1	Anti-LGR5	DA04-10E8.9	Anti-MHC-II	M5/114.15.2
Anti-B7-H4	REA392	Anti-GR-1	RB6-8C5	Anti-LPAM-1	REA457	Anti-MHC-II I-Ab	REA528
Anti-BP-1	6C3	Anti-H2Kd/H2Dd	REA527	Anti-LT-βR	REA416	Anti-MHC-II I-Ak	REA610
Anti-ChemR23	REA461	Anti-H2Kk	H100-27.R55	Anti-Ly-49C/F/I/H	14B11	Anti-MHC-II I-Ek	REA510
Anti-DCIR2	33D1	Anti-H60a	REA556	Anti-Ly49D	4E5	Anti-Nk1.1	PK136
Anti-Dectin-1	REA154	Anti-IgD	11-26c.2a	Anti-Ly-49E/F	REA218	Anti-Notch1	REA357
Anti-Embigin	REA501	Anti-IgDa	REA484	Anti-Ly-49G	AT-8	Anti-Notch2	HMN2-35
Anti-EphA2	REA579	Anti-IgG2ab	X-57	Anti-Ly-49G2	4D11	Anti-Notch4	HMN4-14
Anti-F4/80	REA126	Anti-IgM	X-54	Anti-Ly-49	REA241	Anti-O4	O4
Anti-FcR Ia	MAR-1	Anti-Integrin α7	3C12	Anti-Ly-6B.2	REA115	Anti-PIR-A/B	REA472
Anti-Feeder Cells	mEF-SK4	Anti-Integrin β7	REA441	Anti-Ly-6C	1G7.G10	Anti-Plexin B2	REA445
Anti-FR-4	TH6	Anti-IFN-γR β	REA381	Anti-Ly-6G	REA526	Anti-Prominin-1	MB9-3G8
Anti-Galectin-3	M3/38	Anti-Jagged 2	HMJ2-1	Anti-MDL-1	REA582	Anti-PSA-NCAM	2-2B
Anti-GARP	REA139	Anti-KLRG1	2F1	Anti-Mer	REA477	Anti-QA-1B	6A8.6F10.1A6

Antibody detecting cell surface epitope	Antibody clone	Antibody detecting cell surface epitope	Antibody clone	Antibody detecting cell surface epitope	Antibody clone	Antibody detecting cell surface epitope	Antibody clone
Anti-QA-2	REA523	CD25	REA568	CD81	EAT2	CD183	CXCR3-173
Anti-Rae-1a/b/g	REA578	CD26	H194-112	CD84	REA212	CD184	REA107
Anti-Sca-1	REA422	CD27	REA499	CD85k	REA141	CD185	REA215
Anti-Siglec F	ES22-10D8	CD29	HMB1-1	CD86	PO3.3	CD192	REA538
Anti-Siglec H	551.3D3	CD31	309	CD87	REA630	CD193 (CCR3)	REA122
Anti-Syndecan 4	REA640	CD38	REA616	CD88 (C5AR)	20/70	CD195	REA354
Anti-TCR β	REA318	CD40	FGK45.5	CD90.2	30-H12	CD196	REA277
Anti-TCR γ/δ	GL3	CD41	MWReg30	CD93	REA298	CD197	4B12
Anti-TCR Va3.2 (b,c)	REA395	CD43	REA364	CD94	18d3	CD199	CW-1.2
Anti-TCR Vβ11	REA657	CD44	IM7.8.1	CD95	REA453	CD201	1560
Anti-TCR Vβ14	REA645	CD45	30F11	CD100	REA322	CD204	REA148
Anti-TCR Vβ8.1/8.2	REA585	CD45.1	A20	CD101	REA301	CD205 (DEC205)	NLDC-145
Anti-TCR Vδ4	REA372	CD45.2	104-2	CD103	2E7	CD21/CD35	7E9
Anti-Ter119	Ter-119	CD45R	RA3-6B2	CD104	REA456	CD229	REA273
Anti-TIGIT	REA536	CD45RA	REA639	CD105	MJ7/18	CD244.1	REA524
Anti-Tim-3	RMT3-23	CD45RB	C363-16A	CD106 (VCAM)	429 (MVCAM.A)	CD262	MD5-1-3C2
Anti-TIM-3	REA602	CD47	REA170	CD107a (LAMP-1)	1D4B	CD266	ITEM-4
Anti-Tom22	1C9-2	CD48	HM48-1	CD107b	M3/84	CD270	REA275
CD1d	1B1	CD49a	REA493	CD117	3C11	CD272	REA224
CD2	RM2-5	CD49b	REA541	CD119	REA189	CD278 (ICOS)	REA192
CD3	REA641	CD49c	5H10-27	CD120b	REA228	CD279 (PD1)	HA2-7B1
CD3e	REA606	CD49d	R1-2	CD122 (IL-2Rβ)	TM-β1	CD282	REA109
CD4	REA604	CD49f	REA518	CD125 (IL-5Rα)	REA343	CD284	MTS510
CD5	REA421	CD54	REA171	CD126 (IL-6Rα)	REA620	CD300a	REA573
CD6	REA311	CD55 (DAF)	REA300	CD127	A7R 34	CD301a	REA581
CD9	MZ3	CD59a	REA287	CD131	REA193	CD304 (BDCA-4)	REA380
CD8a	REA601	CD61	2C9.G2 (HMβ3-1)	CD134 (OX40)	REA625	CD307a	REA566
CD8b	H35-17.2	CD62E	REA369	CD137L	TKS-1	CD317 (PDCA-1)	JF05-1C2.4.1
CD11b	REA592	CD62L	MEL14-H2.100	CD138	REA104	CD326	caa7-9G8
CD11c	N418	CD62P	REA344	CD140b	REA634	CD335 (Anti-NKp46)	29A1.4.9
CD16/CD32	REA377	CD63	REA563	CD146	ME-9F1	CD352	13G3
CD18	M18/2	CD66a	REA410	CD150	REA299	CD354	REA191
CD19	6D5	CD69	H1.2F3	CD151	REA561	CD371	REA594
CD20	REA294	CD71	REA627	CD155	REA519	NKp46	29A1.4.9
CD22	Cy34.1	CD73	TY/11.8	CD166	REA370		
CD23	B3B4	CD79b	HM79-12	CD171	555		
CD24	M1/69	CD80	16-10A1	CD180	RP/14		

■ Stable
■ Moderate sensitivity*
■ Strong sensitivity*
* Adjusting the concentration of one of the kit components (enzymes) can aid in preserving sensitive epitopes. For more information please contact us.

Table 1: Stability of cell surface epitopes towards treatment with the Tumor Dissociation Kit, mouse.

Notes





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