



## Tumor Dissociation Kit, mouse

# Preservation of cell surface epitopes

## Background

The Tumor Dissociation Kit, mouse 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. 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 in 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-H60a	REA556	anti-Ly-49	REA241	anti-PSA-NCAM	2-2B
anti-B7-H4	REA392	anti-IgD	11-26c.2a	anti-Ly-6B.2	REA115	anti-QA-1B	6A8.6F10.1A6
anti-BP-1	6C3	anti-IgDa	REA484	anti-Ly-6C	1G7.G10	anti-QA-2	REA523
anti-ChemR23	REA461	anti-IgG2ab	X-57	anti-Ly-6G	REA526	anti-Rae-1a/b/g	REA578
anti-DCIR2	33D1	anti-IgM	X-54	anti-MDL-1	REA582	anti-Sca-1	REA422
anti-Dectin-1	REA154	anti-Integrin α7	3C12	anti-Mer	REA477	anti-Siglec F	ES22-10D8
anti-Embigin	REA501	anti-Integrin β7	REA441	anti-MHC-II	M5/114.15.2	anti-Siglec H	551.3D3
anti-EphA2	REA579	anti-IFN-γR β	REA381	anti-MHC-II I-Ab	REA528	anti-Syndecan 4	REA640
anti-F4/80	REA126	anti-Jagged 2	HMJ2-1	anti-MHC-II I-Ak	REA610	anti-TCR β	REA318
anti-FcR Ia	MAR-1	anti-KLRG1	2F1	anti-MHC-II I-Ek	REA510	anti-TCR γ/δ	GL3
Anti-Feeder Cells	mEF-SK4	anti-LGR5	DA04-10E8.9	anti-Nk1.1	PK136	anti-TCR Va3.2 (b,c)	REA395
anti-FR-4	TH6	anti-LPAM-1	REA457	anti-Notch1	REA357	anti-TCR Vβ11	REA657
anti-Galectin-3	M3/38	anti-LT-βR	REA416	anti-Notch2	HMN2-35	anti-TCR Vβ14	REA645
anti-GARP	REA139	anti-Ly-49C/F/I/H	14B11	anti-Notch4	HMN4-14	anti-TCR Vβ8.1/8.2	REA585
anti-GITR (CD357)	DTA-1	anti-Ly49D	4E5	anti-O4	O4	anti-TCR Vδ4	REA372
anti-GR-1	RB6-8C5	anti-Ly-49E/F	REA218	anti-PIR-A/B	REA472	anti-Ter119	Ter-119
anti-H2Kd/H2Dd	REA527	anti-Ly-49G	AT-8	anti-Plexin B2	REA445	anti-TIGIT	REA536
anti-H2Kk	H100-27.R55	anti-Ly-49G2	4D11	anti-Prominin-1	MB9-3G8	anti-Tim-3	RMT3-23

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-TIM-3	REA602	CD45R	RA3-6B2	CD100	REA322	CD197	4B12
anti-Tom22	1C9-2	CD45RA	REA639	CD101	REA301	CD199	CW-1.2
CD1d	1B1	CD45RB	C363-16A	CD103	2E7	CD201	1560
CD2	RM2-5	CD47	REA170	CD104	REA456	CD204	REA148
CD3	REA641	CD48	HM48-1	CD105	MJ7/18	CD205 (DEC205)	NLDC-145
CD3e	REA606	CD49a	REA493	CD106 (VCAM)	429 (MVCAM.A)	CD21/CD35	7E9
CD4	REA604	CD49b	REA541	CD107a (LAMP-1)	1D4B	CD229	REA273
CD5	REA421	CD49c	5H10-27	CD107b	M3/84	CD244.1	REA524
CD6	REA311	CD49d	R1-2	CD117	3C11	CD262	MD5-1-3C2
CD9	MZ3	CD49f	REA518	CD119	REA189	CD266	ITEM-4
CD8a	REA601	CD54	REA171	CD120b	REA228	CD270	REA275
CD8b	H35-17.2	CD55 (DAF)	REA300	CD122 (IL-2Rβ)	TM-β1	CD272	REA224
CD11b	REA592	CD59a	REA287	CD125 (IL-5Rα)	REA343	CD278 (ICOS)	REA192
CD11c	N418	CD61	2C9.G2 (HMβ3-1)	CD126 (IL-6Rα)	REA620	CD279 (PD1)	HA2-7B1
CD16/CD32	REA377	CD62E	REA369	CD127	A7R 34	CD282	REA109
CD18	M18/2	CD62L	MEL14-H2.100	CD131	REA193	CD284	MTS510
CD19	6D5	CD62P	REA344	CD134 (OX40)	REA625	CD300a	REA573
CD20	REA294	CD63	REA563	CD137L	TKS-1	CD301a	REA581
CD22	Cy34.1	CD66a	REA410	CD138	REA104	CD304 (BDCA-4)	REA380
CD23	B3B4	CD69	H1.2F3	CD140b	REA634	CD307a	REA566
CD24	M1/69	CD71	REA627	CD146	ME-9F1	CD317 (PDCA-1)	JF05-1C2.4.1
CD25	REA568	CD73	TY/11.8	CD150	REA299	CD326	caa7-9G8
CD26	H194-112	CD79b	HM79-12	CD151	REA561	CD335 (anti-NKp46)	29A1.4.9
CD27	REA499	CD80	16-10A1	CD155	REA519	CD352	13G3
CD29	HMB1-1	CD81	EAT2	CD166	REA370	CD354	REA191
CD31	309	CD84	REA212	CD171	555	CD371	REA594
CD38	REA616	CD85k	REA141	CD180	RP/14	NKp46	29A1.4.9
CD40	FGK45.5	CD86	PO3.3	CD183	CXCR3-173		
CD41	MWRReg30	CD87	REA630	CD184	REA107		
CD43	REA364	CD88 (C5AR)	20/70	CD185	REA215		
CD44	IM7.8.1	CD90.2	30-H12	CD192	REA538		
CD45	30F11	CD93	REA298	CD193 (CCR3)	REA122		
CD45.1	A20	CD94	18d3	CD195	REA354		
CD45.2	104-2	CD95	REA453	CD196	REA277		

**Legend**  
■ Stable  
■ Moderate sensitivity\*  
■ Strong sensitivity\*

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

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



► [miltenyibiotec.com](https://www.miltenyibiotec.com)

Miltenyi Biotec provides products and services worldwide. Visit [www.miltenyibiotec.com/local](https://www.miltenyibiotec.com/local) to find your nearest Miltenyi Biotec contact.

Unless otherwise specifically indicated, Miltenyi Biotec products and services are for research use only and not for therapeutic or diagnostic use.  
MACS and the MACS logo are registered trademarks or trademarks of Miltenyi Biotec GmbH. Copyright © 2016 Miltenyi Biotec GmbH and/or its affiliates.  
All rights reserved.