



## Multi Tissue Dissociation Kit 1

# Preservation of cell surface epitopes

### Background

The Multi Tissue Dissociation Kit 1 enables the gentle dissociation of various tissues while preserving cell surface epitopes. Preservation of cell surface epitopes is essential for several downstream applications such as cell separation, flow analysis, and cell sorting. The dissociation process involves enzymatic digestion steps. Here we tested whether the enzymes of the Multi Tissue Dissociation Kit 1 affect the integrity of more than 200 cell surface epitopes. Our results show that most of the epitopes tested are well preserved during enzymatic treatment.

### Method

For mouse tissue, preservation of cell surface epitopes was tested on mouse lungs, spleens, and blood either treated with the Multi Tissue Dissociation Kit 1 enzymes or incubated in a buffer without enzymes (40 min at 37 °C). For human tissue, preservation of cell surface epitopes was tested on PBMCs either treated with the Multi Tissue Dissociation Kit 1 enzymes or incubated in a buffer without enzymes (2x30min at 37 °C). Cells that were incubated without enzymes were labeled with a cell trace dye. Enzymatically treated and untreated samples were then mixed, stained with each of the fluorochrome-conjugated MACS® Antibodies detecting cell surface epitopes, and subsequently 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, mouse

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-B7-H4	REA392	Anti-H2Kd/H2Dd	REA527	Anti-Ly49C/F/I/H	14B11	Anti-MHC-II I-Ek	REA510
Anti-ChemR23	REA461	Anti-H2Kk	H100-27.R55	Anti-Ly49D	4E5	Anti-Nk1.1	PK136
Anti-DCIR-2	33D1	Anti-H60a	REA556	Anti-Ly49E/F	REA218	Anti-NKp46	REA815
Anti-Dectin-1	REA154	Anti-IgD	11-26c.2a	Anti-Ly49G	AT-8	Anti-Notch1	REA357
Anti-Embigin	REA501	Anti-IgDa	REA484	Anti-Ly49G2	4D11	Anti-Notch 2	HMN2-35
Anti-EphA2	REA579	Anti-IgG2ab	X-57	Anti-Ly49H	REA241	Anti-Notch 4	HMN4-14
Anti-F4/80	REA126	Anti-IgM	X-54	Anti-Ly-6G	REA526	Anti-PIR-A/B	REA472
Anti-FcR Ia	MAR-1	Anti-Integrin α7	3C12	Anti-Ly6B.2	REA115	Anti-Plexin B2	REA445
Anti-feeder cells	mEF-SK4	Anti-Integrin β7	REA441	Anti-Ly6C	1G7.G10	Anti-Prominin-1	MB9-3G8
Anti-FR-4	TH6	Anti-Interferon-γR β	REA381	Anti-MDL-1	REA582	Anti-PSA-NCAM	2-2B
Anti-Galectin-3	M3/38	Anti-Jagged 2	HMJ2-1	Anti-Mer	REA477	Anti-QA-1B	6A8.6F10.1A6
Anti-GARP	REA139	Anti-KLRG-1	2F1	Anti-MHC-II	M5/114.15.2	Anti-QA-2	REA523
Anti-GITR (CD357)	DTA-1	Anti-LPAM-1	REA457	Anti-MHC-II I-Ab	REA528	Anti-Rae-1a/b/g	REA578
Anti-GR-1	RB6-8C5	Anti-LT-βR	REA416	Anti-MHC-II I-Ak	REA610	Anti-Sca-1	REA422

## Results, mouse

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-Siglec F	ES22-10D8	CD26	H194-112	CD81	EAT2	CD166	REA370
Anti-Siglec H	551.3D3	CD27	REA499	CD84	REA212	CD171	555
Anti-Syndecan 4	REA640	CD29	HMβ1-1	CD85k	REA141	CD180	RP/14
Anti-TCR β	REA318	CD31	309	CD86	PO3.3	CD183	CXCR3-173
Anti-TCR γ/δ	GL3	CD38	REA616	CD87	REA630	CD184	REA107
Anti-TCR Vα 3.2 (b,c)	REA395	CD40	FGK45.5	CD88	20/70	CD185	REA215
Anti-TCR Vβ11	REA657	CD41	MWReg30	CD90.2	30-H12	CD192	REA538
Anti-TCR Vβ8.1/8.2	REA585	CD43	REA364	CD93	REA298	CD193	REA122
Anti-TCR Vβ14	REA645	CD44	IM7.8.1	CD94	18d3	CD195	REA354
Anti-TCR Vδ4	REA372	CD45	30F11	CD95	REA453	CD196	REA277
Anti-Ter119	Ter-119	CD45.1	A20	CD100	REA322	CD197	4B12
Anti-TIGIT	REA536	CD45.2	104-2	CD101	REA301	CD199	CW-1.2
Anti-Tim-3	RMT3-23	CD45R	RA3-6B2	CD103	2E7	CD201	1560
Anti-TIM-3	REA602	CD45RA	REA639	CD104	REA456	CD204	REA148
Anti-Tom22	1C9-2	CD45RB	C363-16A	CD105	MJ7/18	CD205	NLDC-145
CD1d	1B1	CD47	REA170	CD106	429 (MVCAM.A)	CD229	REA273
CD2	RM2-5	CD48	HM48-1	CD107a	1D4B	CD244.1	REA524
CD3	REA641	CD49a	REA493	CD107b	M3/84	CD262	MD5-1-3C2
CD3e	REA606	CD49b	REA541	CD117	3C11	CD266	ITEM-4
CD4	REA604	CD49d	R1-2	CD119	REA189	CD270	REA275
CD5	REA421	CD49c	5H10-27	CD120b	REA228	CD272	REA224
CD6	REA311	CD49f	REA518	CD122	TM-β1	CD278	REA192
CD8a	REA601	CD54	REA171	CD125	REA343	CD279	HA2-7B1
CD8b	H35-17.2	CD55 (DAF)	REA300	CD126	D7715A7	CD282	REA109
CD9	MZ3	CD59a	REA287	CD126	REA620	CD284	MTS510
CD11b	REA592	CD61	2C9.G2 (HMβ3-1)	CD127	A7R 34	CD300a	REA573
CD11c	N418	CD62E	REA369	CD131	REA193	CD301a	REA581
CD16/CD32	REA377	CD62L	MEL14-H2.100	CD134	REA625	CD304	REA380
CD18	M18/2	CD62P	REA344	CD137L	TKS-1	CD307a	REA566
CD19	6D5	CD63	REA563	CD138	REA104	CD317	JF05-1C2.4.1
CD20	REA294	CD66a	REA410	CD140b	APB5	CD326	caa7-9G8
CD21/CD35	7E9	CD69	H1.2F3	CD140b REA	REA634	CD352	13G3
CD22	Cy34.1	CD71	REA627	CD146	ME-9F1	CD354	REA191
CD23	B3B4	CD73	TY/11.8	CD150	REA299	CD371	REA594
CD24	M1/69	CD79b	HM79-12	CD151	REA561		
CD25	REA568	CD80	16-10A1	CD155	REA519		

## Results, human

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-FcεR1a	CRA	CD27	M-T271	CD73	AD2	CD171	REA163
Anti-Galectin-3	M3/38	CD29	TS2/16	CD79b	REA120	CD180	MHR73-11
Anti-HLA-A/B/C	REA230	CD31	AC128	CD80	2D10	CD181	8F1
Anti-HLA-DR/DQ/DP	REA332	CD35	E11	CD81	REA513	CD184	12G5
Anti-Jagged 2	MHJ2-523	CD38	IB6	CD84	MZ18-21F6	CD185	REA103
Anti-KLRG-1	REA261	CD40	HB14	CD85a (ILT5)	REA207	CD192	REA264
Anti-Notch 2	MHN2-25	CD41b	REA336	CD85j (ILT2)	GHI/75	CD193	5E8.4
Anti-TCR-Vα7.2	REA179	CD43	DF-T1	CD85k	REA141	CD195	REA245
Anti-TCR-Vδ1	REA173	CD44	DB105	CD87	VIM5	CD196	REA190
Anti-TCR-Vδ2	123R3	CD45	5B1	CD88	S5/1	CD197	FR 11-11E8
Anti-TCRα/β	BW242/412	CD45RA	T6D11	CD90	DG3	CD201	REA337
Anti-TCRγ/δ	11F2	CD45RB	REA119	CD93	VIMD2	CD205	HD30
Anti-Tom22	1C9-2	CD45R0	UCHL1	CD95	DX2	CD229	Hly9.1.25
CD1d	51,1	CD47	REA220	CD101	BB27	CD244	REA112
CD2	LT2	CD48	REA426	CD103	REA803	CD262	DJR2-4
CD3	BW264/56	CD49a	TS2/7	CD104	REA236	CD266	ITEM-4
CD4	VIT4	CD49b	REA188	CD105	43A4E1	CD270	REA247
CD5	UCHT2	CD49d	MZ18-24A9	CD106	REA269	CD282	REA109
CD6	M-T411	CD49e	NKI-SAM1	CD107a	H4A3	CD284	HTA125
CD8	BW135/80	CD49f	GoH3	CD117	A3C6E2	CD307a	REA440
CD9	SN4 C3-3A2	CD54	REA266	CD119	REA161	CD317	REA202
CD11b	M1/70.15.11.5	CD55 (DAF)	JS11	CD120a	REA252	CD326	HEA-125
CD11c	MJ4-27G12	CD56	AF12-7H3	CD120b	REA520	CD328	REA214
CD16	VEP13	CD59a	REA496	CD122	REA167	CD354	REA213
CD18	TS1/18	CD61	Y2/51	CD123	AC145		
CD19	LT19	CD62E	REA280	CD127	MB15-18C9		
CD20	LT20	CD62P	REA389	CD137L	REA254		
CD21	HB5	CD63	H5C6	CD138	REA104		
CD22	REA340	CD66abce	TET2	CD140b	REA363		
CD23	M-L23.4	CD66b	REA306	CD146	541-10B2		
CD24	32D12	CD69	FN50	CD151	REA265		
CD25	4E3	CD71	AC102	CD166	REA442		

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

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



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