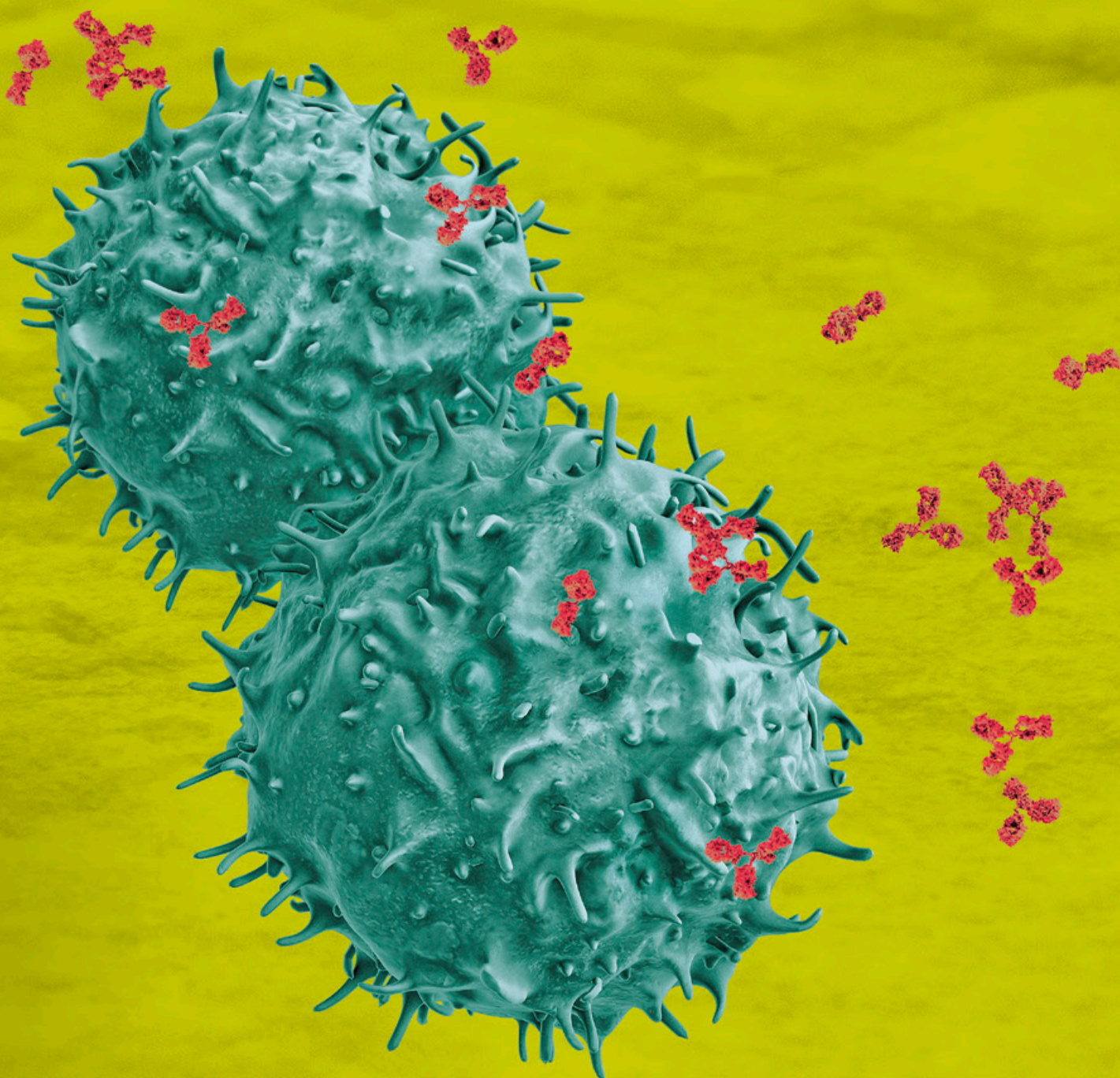
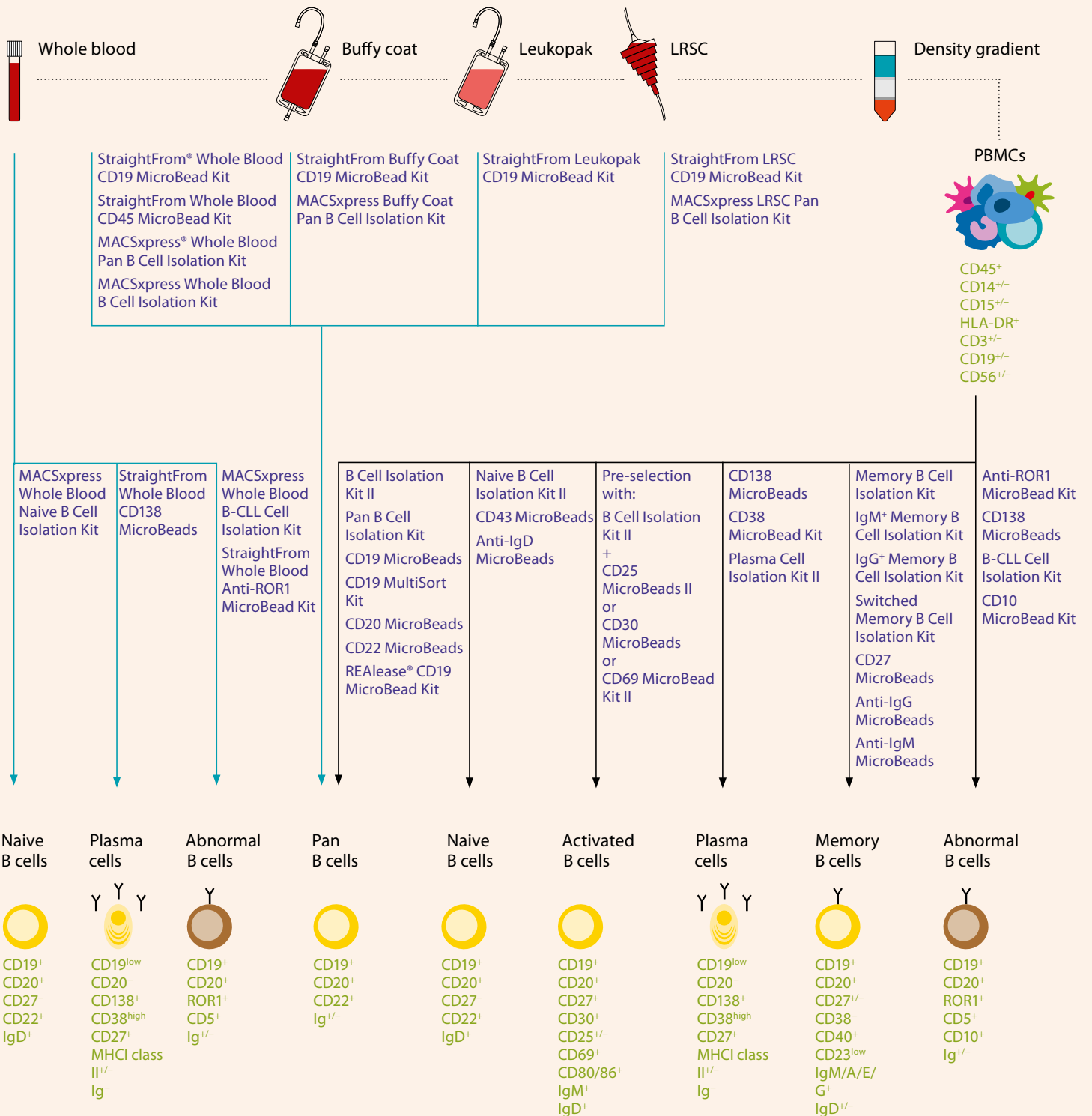


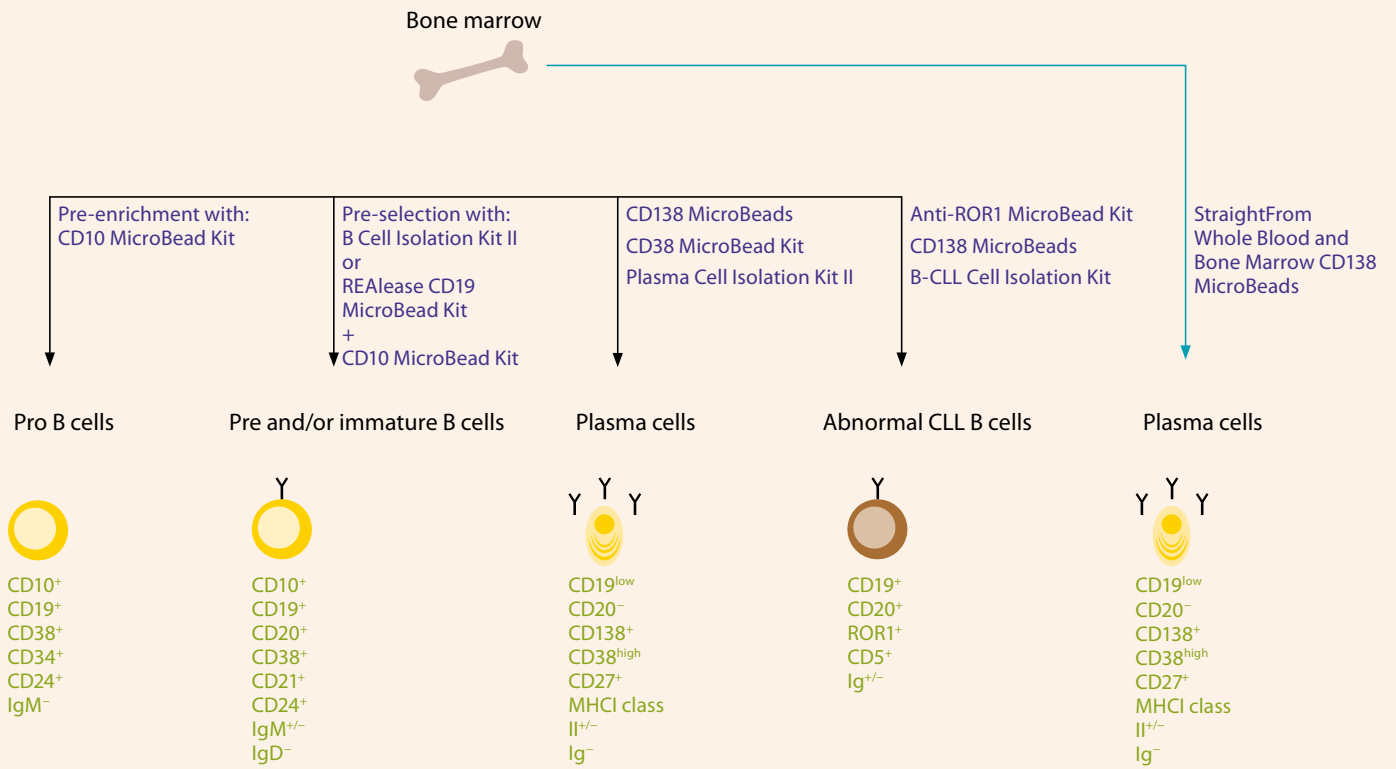
The complete portfolio for your B cell research

Product quick guide



Human B cells from whole blood and bone marrow





B cell cultivation and activation

B cells and B cell subsets

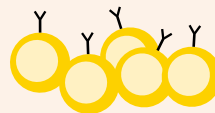


CD19⁺
CD20⁺
CD22⁺
Ig^{+/-}

B Cell Expansion Kit, TLR Ligands*
Cytokines e.g., IL-4*, IL-21, TNF-α*
Human CD40-Ligand Multimer Kits



Expanded and activated B cells



CD19⁺
CD20⁺
CD22⁺
CD80/86⁺
CD69⁺
CD30⁺
CD25⁺
MHC class II^{high}
Ig^{+/-}

Legend

→ direct cell separation products

→ separation

→ differentiation/cultivation

■ MACS[®] Cell Separation products (RUO)

■ MACS Cell Culture and Stimulation products

■ MACS Flow Cytometry and Cytokine detection products (RUO)

CLL: chronic lymphocytic leukemia

ROR: receptor tyrosine kinase-like orphan receptor 1

LRSC: leukocyte reduction system chamber

PBMC: peripheral blood mononuclear cells

HLA: human leukocyte antigen

TNF: tumor necrosis factor

CD: cluster of differentiation

MHC: major histocompatibility complex

Ig: immunoglobulin

- no expression

+ expression

^{low} low expression

^{int} intermediate expression

^{high} high expression

^{+/-} expression dependent on subset

*Available also as MACS GMP product

Human

Product tables

Cell separation reagents

Products	Order no.
Anti-IgD MicroBeads	130-103-775
Anti-IgG MicroBeads	130-047-501
Anti-IgM MicroBeads	130-093-230
Anti-ROR1 MicroBead Kit	130-103-929
B Cell Isolation Kit II	130-091-151
B-CLL Cell Isolation Kit	130-103-466
CD10 MicroBead Kit	130-093-452
CD19 MicroBeads	130-050-301
CD19 MultiSort Kit	130-055-301
CD20 MicroBeads	130-091-104
CD22 MicroBeads	130-046-401
CD27 MicroBeads	130-051-601
CD38 MicroBead Kit	130-092-263
CD43 MicroBeads	130-091-333
CD138 MicroBeads	130-051-301
IgG ⁺ Memory B Cell Isolation Kit	130-094-350
IgM ⁺ Memory B Cell Isolation Kit	130-093-619
Memory B Cell Isolation Kit	130-093-546
Naive B Cell Isolation Kit II	130-091-150
Pan B Cell Isolation Kit	130-101-638
Plasma Cell Isolation Kit II	130-093-628
Switched Memory B Cell Isolation Kit	130-093-617
REAlEase[®]	
REAlEase CD19 MicroBead Kit	130-117-034
StraightFrom[®]	
StraightFrom Buffy Coat CD19 MicroBead Kit	130-114-974
StraightFrom Leukopak [®] CD19 MicroBead Kit	130-117-021
StraightFrom LRSC CD19 MicroBead Kit	130-117-025
StraightFrom Whole Blood CD19 MicroBeads	130-090-880
StraightFrom Whole Blood CD138 MicroBeads	130-093-062
StraightFrom Whole Blood and Bone Marrow CD138 MicroBeads	130-105-961
StraightFrom Whole Blood Anti-ROR1 MicroBead Kit	130-105-751
MACSxpress[®]	
MACSxpress Buffy Coat Pan B Cell Isolation Kit	130-120-002
MACSxpress LRSC Pan B Cell Isolation Kit	130-119-998
MACSxpress Whole Blood B Cell Isolation Kit	130-098-190
MACSxpress Whole Blood B-CLL Cell Isolation Kit	130-104-445
MACSxpress Whole Blood Naive B Cell Isolation Kit	130-098-186
MACSxpress Whole Blood Pan B Cell Isolation Kit	130-104-444

Cell culture reagents

Products	Research grade	Premium grade	MACS [®] GMP
BAFF	●		
B Cell Expansion Kit		●	
CD40-Ligand Multimer Kit		●	
CXCL13	●		
Flt3 Ligand	●	●	●
IFN-γ1b	●	●	
IL1-beta	●	●	●
IL-2 improved sequence (IS)	●	●	●
IL-3	●	●	●
IL-4	●	●	●
IL-6	●	●	●
IL-7	●	●	●
IL-10	●		
IL-12		●	
IL-13	●	●	
IL-17	●		
IL-21	●	●	●
IL-35	●		
PepTivator [®] (Peptide Pools)	●	●	●
SCF	●	●	●
SDF-1α	●		
TGF-β1		●	●
TLR7-Ligands	●		
TLR9-Ligands	●		●
TNF-α	●	●	●
TSLP	●		

For more information about custom fillings and cocktails visit:

www.miltenyibiotec.com/cellculture

Flow cytometry antibodies

Antigen	Hybridoma Clones	REAffinity™ Clones	REAlEase® Clones
CD1d	5I.1		
CD5	UCHT2	REA782	REAL382
CD10	97C5	REA877	REAL318
CD19	LT19	REA675	REAL106
CD20	LT20	REA780	
CD21	HB5	REA940	
CD22		REA340	
CD23	M-L23.4	REA1222	
CD24	32D12	REA832	
CD25	4E3, 3G10	REA570, REA945	REAL128
CD27	M-T271, LG.3A10	REA499	REAL173
CD32	2E1	REA997	
CD38	IB6	REA572, REA671	
CD43	DF-T1	REA833	
CD45	5B1	REA747	REAL258
CD45RA	T6D11	REA562, REA1047	
CD45RB		REA119	
CD45RO	UCLH1	REA611	REAL377
CD80	2D10	REA661	
CD86	FM95	REA968	
CD93	VIMD2	REA1111	
CD95 (FAS)	DX2	REA738	REAL186
CD138	44F9		
IL-10	JES3-9D7	REA842	
IgD	IgD26	REA740	
IgM	PJ2-22H3		
IgG	IS11-3B2.2.3		
IgG (H+L)	Polyclonal		
IgG1	IS11-12E4.23.20		
IgE	MB10-5C4	REA1049	
IgA	IS11-8E10	REA1014	
IgA2	IS11-21E11	REA995	
HLA	Many different clones to several HLA class antigens		

Flow cytometry cocktails and kits

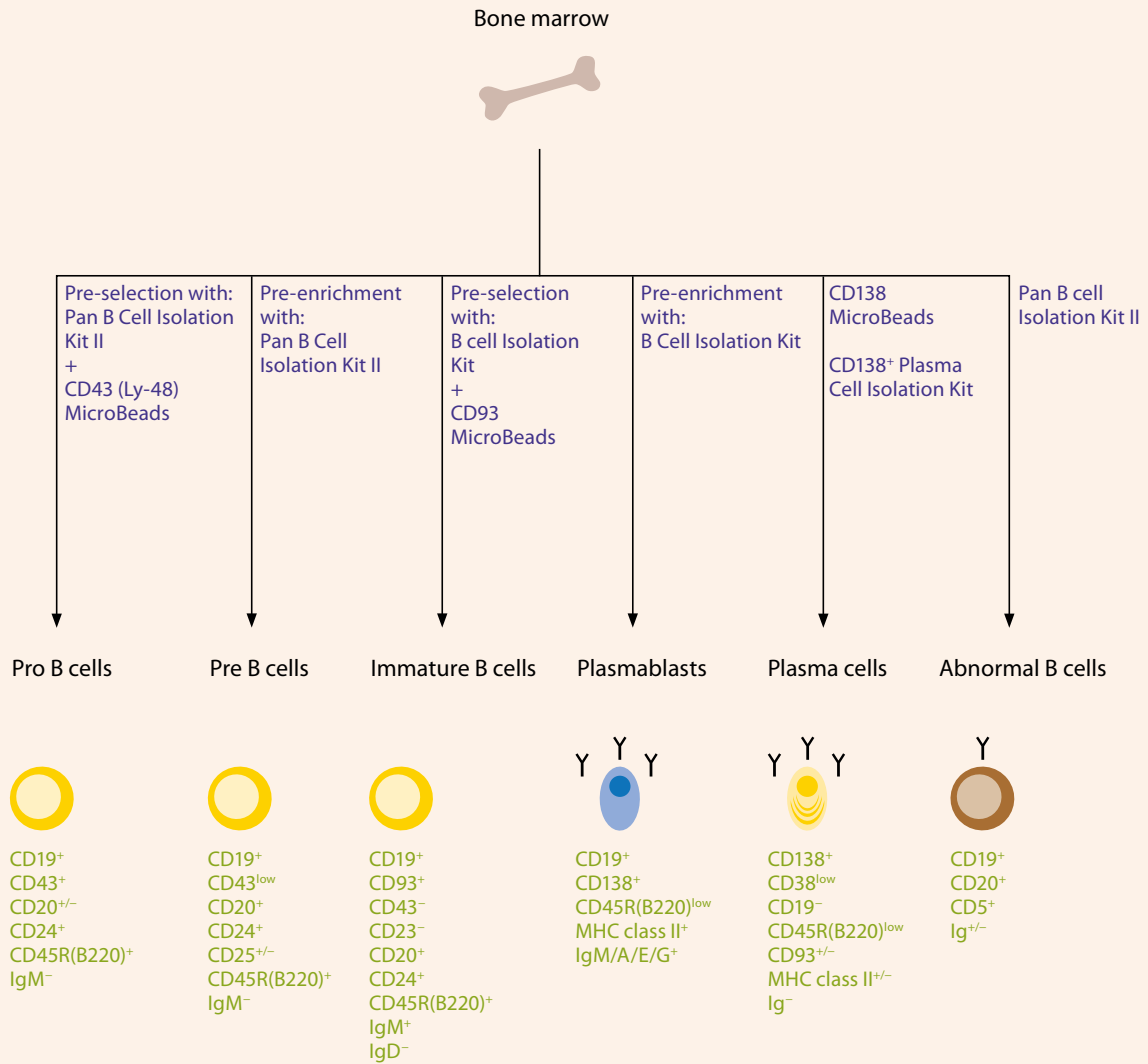
Products	Order no.
GM-CSF Secretion Assay – Detection Kit (PE)	130-105-755
IFN-γ Secretion Assay – Detection Kit (APC)	130-090-762
IFN-γ Secretion Assay – Detection Kit (FITC)	130-090-433
IFN-γ Secretion Assay – Detection Kit (PE)	130-054-202
IL-2 Secretion Assay – Detection Kit (APC)	130-090-763
IL-2 Secretion Assay – Detection Kit (PE)	130-090-487
IL-4 Secretion Assay – Detection Kit (PE)	130-054-102
IL-5 Secretion Assay – Detection Kit (APC)	130-091-624
IL-5 Secretion Assay – Detection Kit (PE)	130-091-623
IL-10 Secretion Assay – Detection Kit (APC)	130-090-761
IL-10 Secretion Assay – Detection Kit (PE)	130-090-434
IL-12 Secretion Assay – Cell Enrichment and Detection Kit (PE)	130-092-122
RCI Anti-IL-2-PE	130-099-450
RCI Anti-IFN-γ-APC	130-097-596
RCI Anti-IFN-γ-PE	130-097-600
TNF-α Secretion Assay – Detection Kit (APC)	130-091-267
TNF-α Secretion Assay – Detection Kit (PE)	130-091-268

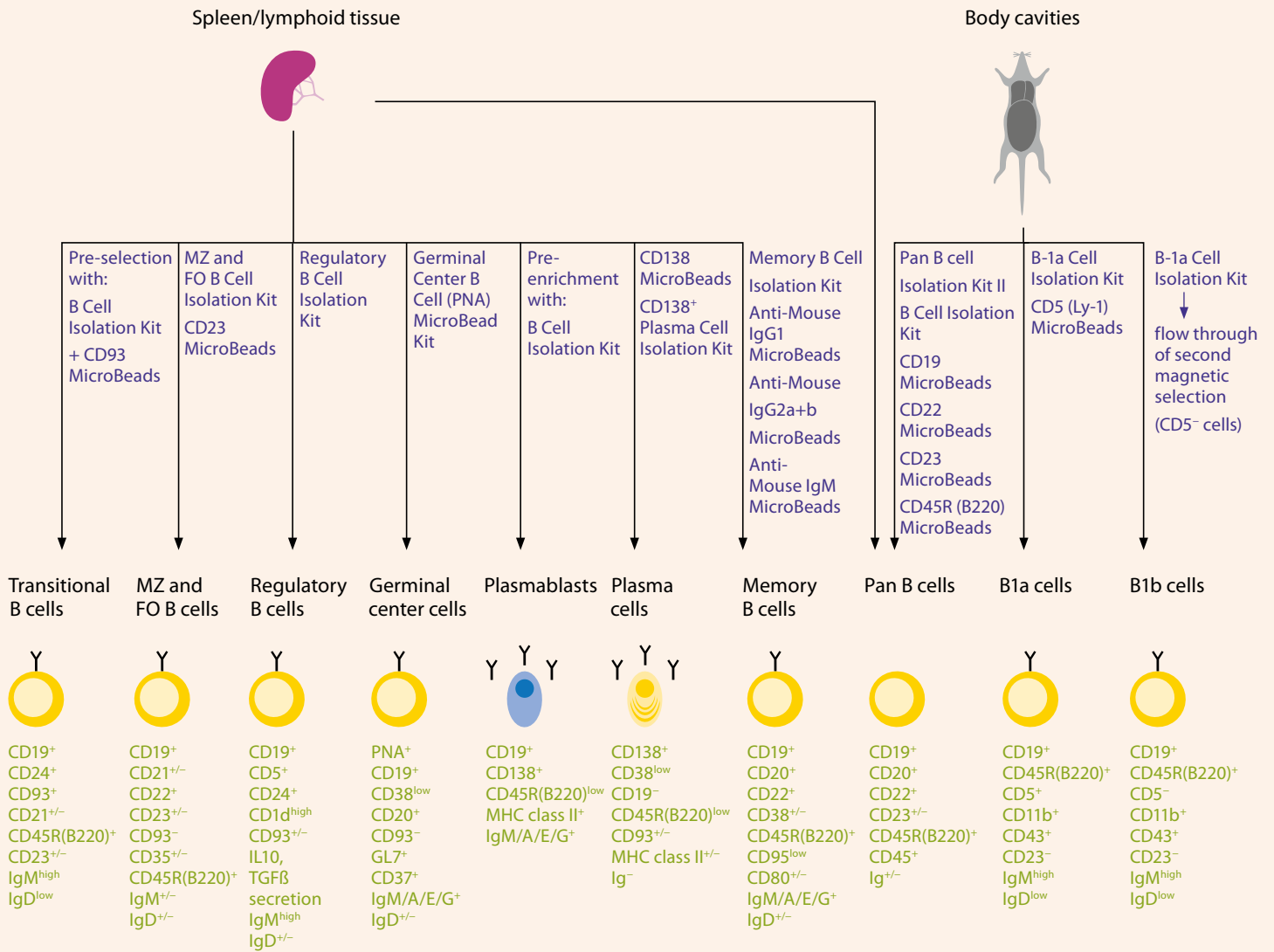
MACSPlex Custom Cytokine Assays

Products	Order no.
MACSPlex Cytokine Basic Kit, human and mouse	130-109-701
MACSPlex Cytokine 12 Kit	130-099-169
MACSPlex GM-CSF Reagents Kit	130-109-684
MACSPlex IFN-α Reagents Kit	130-109-683
MACSPlex IFN-γ Reagents Kit	130-109-695
MACSPlex IL-2 Reagents Kit	130-109-704
MACSPlex IL-4 Reagents Kit	130-109-689
MACSPlex IL-5 Reagents Kit	130-109-705
MACSPlex IL-6 Reagents Kit	130-109-691
MACSPlex IL-9 Reagents Kit	130-109-693
MACSPlex IL-10 Reagents Kit	130-109-699
MACSPlex IL-12 Reagents Kit	130-109-697
MACSPlex IL-17A Reagents Kit	130-109-688
MACSPlex TNF-α Reagents Kit	130-109-694

For more information about antibodies and fluorescent conjugates for flow cytometry visit:
www.miltenyibiotec.com/flowcytometry

Mouse B cells from bone marrow, spleen, and lymphoid tissue





Legend

→ separation

- MACS[®] Cell Separation products (RUO)
- MACS Flow Cytometry and Cytokine detection products (RUO)

MZ: marginal zone

FO: follicular

TGF: transforming growth factor

CD: cluster of differentiation

MHC: major histocompatibility complex

Ig: immunoglobulin

PNA: peanut agglutinin

- no expression

^{low} low expression

^{int} intermediate expression

+ expression

^{high} high expression

^{+/-} expression dependent on subset

Mouse

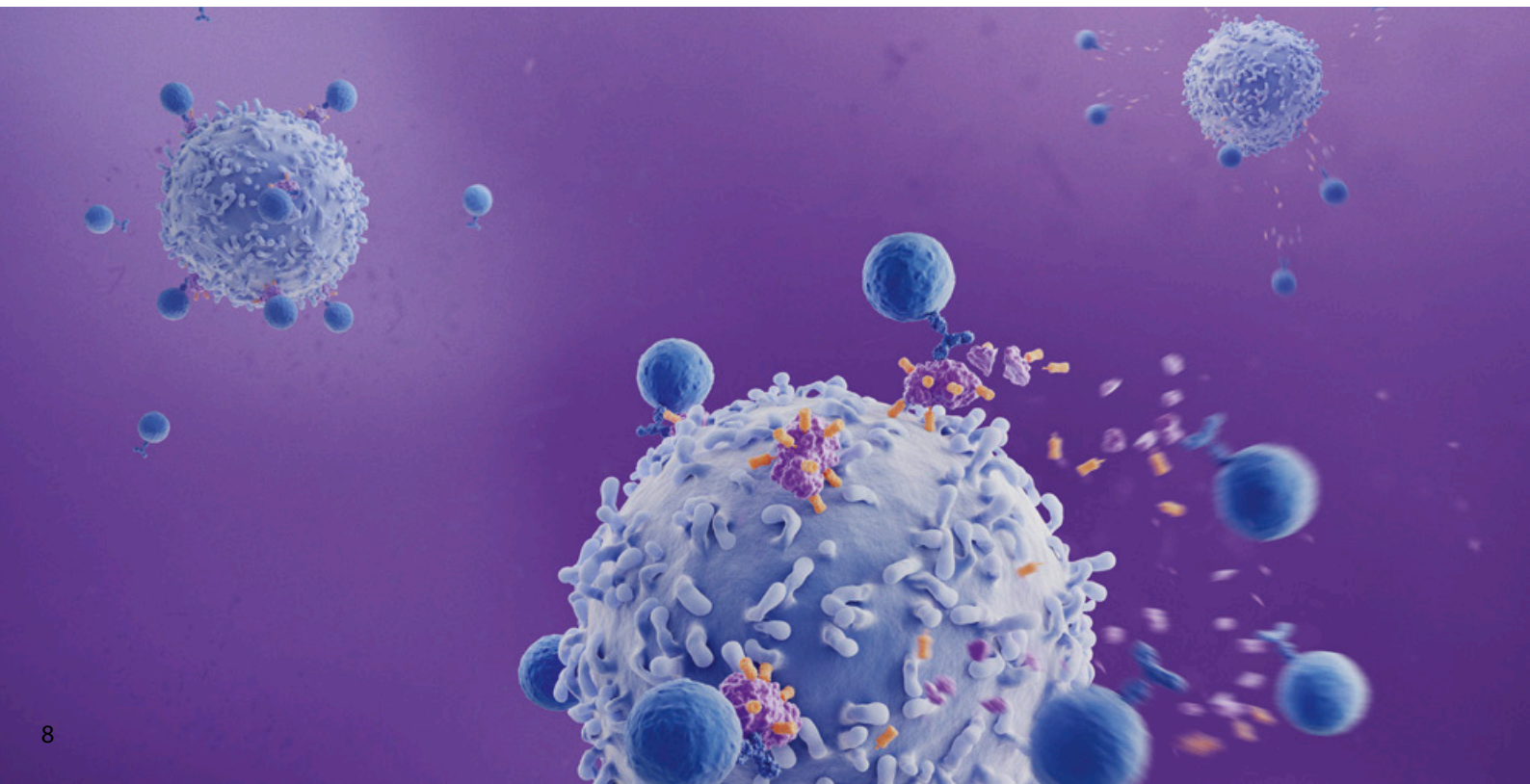
Product tables

Cell separation reagents

Products	Order no.
Anti-Mouse IgG1 MicroBeads	130-047-101
Anti-Mouse IgG2a+b MicroBeads	130-047-201
Anti-Mouse IgM MicroBeads	130-047-301
B-1a Cell Isolation Kit	130-097-413
B Cell Isolation Kit	130-090-862
CD5 (Ly-1) MicroBeads	130-049-301
CD19 MicroBeads	130-121-301
CD22 MicroBeads	130-103-776
CD23 MicroBeads	130-098-784
CD43 (Ly-48) MicroBeads	130-049-801
CD45R (B220) MicroBeads	130-049-501
CD93 MicroBeads	130-105-753
CD138 MicroBeads	130-098-257
CD138 ⁺ Plasma Cell Isolation Kit	130-092-530
Germinal Center B Cell (PNA) MicroBead Kit	130-110-479
Memory B Cell Isolation Kit	130-095-838
MZ and FO B Cell Isolation Kit	130-100-366
Pan B Cell Isolation Kit II	130-104-443
Pan B Cell Isolation Kit	130-095-813
Regulatory B Cell Isolation Kit	130-095-873

Cell culture reagents

Products	Research grade	Premium grade	Functional grade
Flt3 Ligand	●		
IFN- γ	●	●	
IL-4	●	●	
IL-5	●		
IL-6	●	●	
IL-13	●		
SCF	●	●	
Stimulation antibodies			
CD2 antibody pure			●
CD48 antibody pure			●
CD127 antibody pure			●
CD134 (OX40) antibody pure			●
CD137 antibody pure			●
CD153 antibody pure			●
CD252 (OX40L) antibody pure			●
CD275 (B7-H2) antibody pure			●
CD279 (PD1) antibody pure			●



Flow cytometry antibodies

Antigen	Hybridoma Clones	REAffinity™ Clones	REALease® Clones
CD1d	1B1		
CD5	53-7.3	REA421	REAL174
CD11b	M1/70.15.11.5	REA592	REAL113
CD19	6D5	REA749	
CD21/CD35	7E9	REA800	
CD22	Cy34.1	REA1187	
CD23	B3B4	REA1068	
CD24	M1/69	REA743	
CD25	7D4	REA568	
CD27	LG.3A10	REA499	
CD38	90.4	REA616	REAL181
CD43	L11	REA840	
CD45	30F11	REA737	REAL180
CD45.1	A20	REA1179	
CD45.2	104-2	REA1223	
CD45R (B220)	RA3-6B2	REA755	REAL132
CD45RA	14.8	REA639	
CD45RB	C363-16A	REA1180	
CD80	16-10A1	REA983	
CD86	PO3.3	REA1190	
CD93		REA298	
CD95 (FAS)		REA453	
CD138		REA104	
IL-10	JES5-16E3	REA1008	
IgD	11-26c.2a	REA772	
IgM	X-54	REA979	
IgG1	X-56	REA1017	
IgG2ab	X-57		
MHC Class II variants	M5/114.15.2	REA510	REAL362
MHC Class II variants	M5/114.15.2	REA528	REAL362
MHC Class II variants	M5/114.15.2	REA564	REAL362
MHC Class II variants	M5/114.15.2	REA610	REAL362
MHC Class II variants	M5/114.15.2	REA813	REAL362

Flow cytometry cocktails and kits

Products	Order no.
Mouse IL-2 Secretion Assay – Detection Kit (APC)	130-090-987
Mouse IL-2 Secretion Assay – Detection Kit (PE)	130-090-491
Mouse IL-4 Secretion Assay – Detection Kit (PE)	130-090-479
Mouse IL-5 Secretion Assay – Detection Kit (APC)	130-091-174
Mouse IL-5 Secretion Assay – Detection Kit (PE)	130-091-166
Mouse IL-10 Secretion Assay – Detection Kit (APC)	130-090-939
Mouse IL-10 Secretion Assay – Detection Kit (PE)	130-090-489
Mouse IFN-γ Secretion Assay – Detection Kit (APC)	130-090-984
Mouse IFN-γ Secretion Assay – Detection Kit (PE)	130-090-516

MACSPlex Custom Cytokine Assays

Products	Order no.
MACSPlex Cytokine Basic Kit, human and mouse	130-109-701
MACSPlex Cytokine 10 Kit	130-101-740
MACSPlex GM-CSF Reagents Kit	130-109-702
MACSPlex IFN-γ Reagents Kit	130-109-687
MACSPlex IL-2 Reagents Kit	130-109-686
MACSPlex IL-4 Reagents Kit	130-109-690
MACSPlex IL-5 Reagents Kit	130-109-692
MACSPlex IL-10 Reagents Kit	130-109-698
MACSPlex IL-12 Reagents Kit	130-109-696
MACSPlex IL-17A Reagents Kit	130-109-685
MACSPlex IL-23 Reagents Kit	130-109-700
MACSPlex TNF-α Reagents Kit	130-109-703

For more information about antibodies and fluorescent conjugates for flow cytometry visit:
www.miltenyibiotec.com/flowcytometry

Other species

Product tables

Cell separation reagents

Products	Order no.
Rat	
Anti-Rat Kappa MicroBeads	130-047-401
CD43 MicroBeads	130-090-742
CD45R MicroBeads	130-090-495
Non-human primate	
CD20 MicroBeads	130-091-105

For more information about custom fillings and cocktails visit:

www.miltenyibiotec.com/cellculture

Flow cytometry antibodies

Antigen	Hybridoma Clones	REAffinity™ Clones
Rat		
CD5		REA750
CD24		REA405
CD32		REA256
CD38		REA683
CD43		REA503
CD45		REA504
CD45R		REA450
CD45RC		REA1000
CD86	24F	
CD200		REA532
CD252	ATM-2	
IgG1	RG11/39.2	
IgG2a	RG7/1.30	
IgG2b	RG7/11.1	
MHC Class II		REA510
Non-human primate		
CD45	MB4-6D6	REA1023

Visit our webpage for our complete product portfolios and scientific resources

- Webinars
- Videos
- Protocols and workflows
- Application notes
- Posters
- and more ...

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