



Mesenchymal Stem Cells (MSC)

BECKMAN COULTER PORTFOLIO

WITH THE RELEASE OF CD133-APC BECKMAN COULTER COMPLETES ITS PORTFOLIO FOR BASIC MESENCHYMAL PROGENITOR CELLS STUDIES

Mesenchymal Stromal/Stem Cells (MSC) can be isolated from a variety of tissues (bone marrow, adipose tissue, placenta, etc.). They are a hot topic in research studies since they may have a considerable therapeutic potential. MSCs are multipotent stromal cells with a distinct expression pattern of surface markers that are able to differentiate into various cell types *in vitro*.

The International Society for Cellular Therapy (ISCT) has proposed a set of standards to define MSCs. A cell can be classified as an MSC if it shows plastic adherent properties under normal culture conditions and has a fibroblast-like morphology.

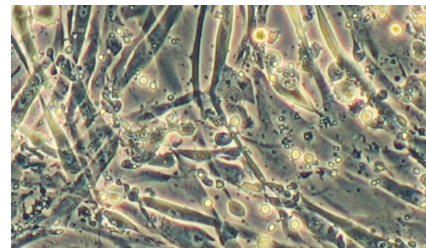


Fig 1. Bone marrow-derived mesenchymal progenitor cells after 2 weeks of culture in plastic cell culture flasks.

Despite apparent heterogeneity, a consensus has been reached that bone marrow-derived MSCs are negative for CD45 and CD34, but do express a variety of surface markers, including CD9, CD10, CD13, CD29, CD44, CD73, CD90, and CD105.⁵

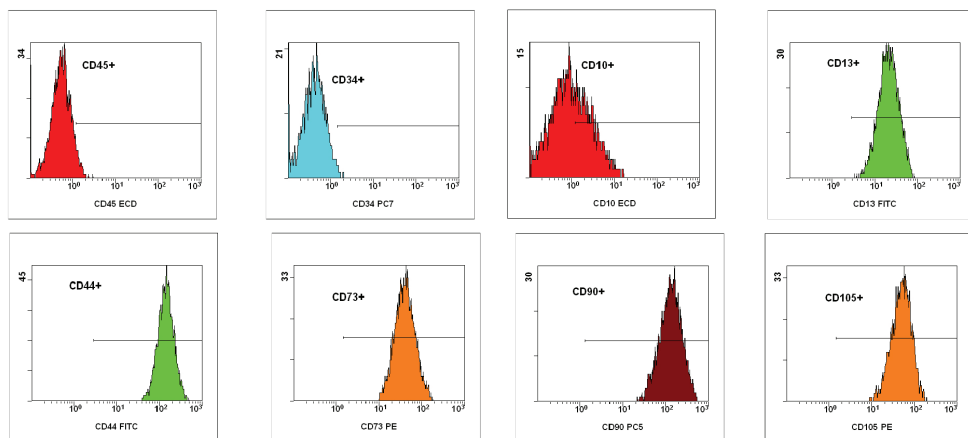


Fig 2. Examples of results on bone marrow-derived mesenchymal progenitor cells. Data collected on FC500⁵⁶
Remark: MSCs from other sources than bone-marrow may have a different expression profile

⁵A. A. Nery, I. C. Nascimento, T. Glaser, V. Bassaneze, J.E. Krieger, H.Ulrich. Human Mesenchymal Stem Cells: From Immunophenotyping by Flow Cytometry to Clinical Applications. Cytometry Part A 83A: 4861, 2013.

⁵⁶ Iconography provided by University of Tübingen, Germany.

Mesenchymal Stem Cells (MSC) Portfolio

Description	Clone	Status	Pacific Blue*	Krome Orange	FITC	PE / RD1	ECD	PC5	PC5.5	PC7	APC	APC-Alexa Fluor *700	APC-Alexa Fluor *750	Unlabelled
CD9	ALB6	ASR	B09979	-	IM1755U	-	-	-	-	-	-	-	B13649	-
		RUO	-	-	-	-	-	-	-	-	-	-	-	IM0117
CD10	ALB1	CE	-	-	A07759	A07760	-	A07761	-	-	-	-	-	-
		ASR	-	-	IM2720U	IM1915U	IM3608U	IM2721U	B16490	A46527	IM3633	A86353	A89310	-
	ALB2	ASR	-	-	IM0471U	-	-	-	-	-	-	-	-	-
	J5	ASR	-	-	6604107 6602463	6604120 6603475	-	-	-	-	-	-	-	-
CD13	366 (MY7) Immu103.44	ASR	-	-	-	-	-	-	-	B19714	-	-	-	-
		CE	-	-	-	-	B36286	A07763	-	-	-	-	-	-
		ASR	-	-	-	-	A33097	IM2639U	A79389	A46528	A87783	-	-	-
	SJ1D1	CE	-	-	-	A07762	-	-	-	-	-	-	-	-
		ASR	-	-	IM0778U	IM1427U	B24026	-	-	-	-	-	-	-
CD14	116	IVD & CE	-	-	6604114	6604500	-	-	-	-	-	-	-	-
	322A-1	IVD & CE	-	-	6603511 6604110	6603262	-	-	-	-	-	-	-	-
		CE	-	-	B36297	A07764	-	A07765	-	-	IM2580	-	-	-
	RMO52	ASR	B00846	B01175	IM0645U	IM0650U	IM2707U	IM2640U	A70204	A22331	IM2580U	A99020	A86052	-
		RUO	-	-	-	-	-	-	-	-	-	-	-	IM0643
CD29	4B4LDC9LDH8	RUO	-	-	6604105	6604159 6603177	-	-	-	-	-	-	-	-
	K20	ASR	-	-	IM0791U	-	-	-	-	-	-	-	-	-
	Lia1/2	RUO	-	-	-	-	-	-	-	-	-	-	-	IM1598
CD31	1F11	RUO	-	-	-	IM2409	-	-	-	-	-	-	-	-
	5.6E	ASR	B13035	-	IM1431U	-	-	-	-	-	-	-	-	-
CD34	581	CE	-	-	IM1870	A07776	-	A07777	-	A21691	IM2472	-	-	-
		ASR	-	-	IM1870U	IM1871U	IM2709U	IM2648U	-	A51077	IM2472U	A86354	A89309	-
	Immu133	RUO	-	-	-	IM1420	-	-	-	-	-	-	-	-
	QBEnd10	ASR	-	-	-	IM1250U	-	IM2650U	-	-	-	-	-	-
		RUO	-	-	-	-	-	-	-	-	-	-	-	IM0786
		QBEnd10 + Immu133 + Immu409	ASR	-	-	-	IM1459U	-	-	-	-	-	-	-
CD44	J173	ASR	B37789	-	IM1219U	A32537	-	-	-	-	-	-	B30637	-
		RUO	-	-	-	-	-	-	-	-	-	-	-	IM0845
CD45	ALB12	ASR	-	-	IM0647	-	-	-	-	-	-	-	-	-
		RUO	-	-	-	-	-	-	-	-	-	-	-	-
	Immu19.2	ASR	-	-	-	-	-	IM2652U	-	-	-	-	-	-
		RUO	-	-	-	IM1833	-	-	-	-	-	-	-	-
	J33	CE	A74763	B36294	A07782	A07783	A07784	A07785	A62835	IM3548	IM2473	A79390	A79392	-
ASR		A74765	A96416	IM0782U	IM2078U	IM2710U	IM2653U	A54139	IM3548U	IM2473U	A71117	A71119	-	
KC56	ASR	-	-	6604104 6603838	6603839	-	-	-	-	-	-	-	-	
CD73	AD-2	ASR	-	-	-	B68176	-	-	-	-	-	-	-	
CD90	F15-42-1-5	ASR	-	-	IM1839U	IM1840U	-	-	-	-	-	-	-	
	Thy1/310	ASR	B30649	-	-	-	-	IM3703	-	-	-	-	B36121	
CD105	1G2	ASR	-	-	-	A07414	-	-	-	-	-	-	-	
	TEA3/17.1	ASR	-	-	-	B76299	-	-	-	B43293	-	-	-	
CD106	1G11	RUO	-	-	-	A66085	-	-	-	-	-	-	-	
CD109	8A3	RUO	-	-	-	A08933	-	-	-	-	-	-	-	
CD117	104D2D1	CE	-	-	-	IM2732	-	IM2733	-	B49221	B36300	-	-	
		ASR	-	-	-	IM2732U	B38307	IM2733U	A66333	IM3698	IM3638	-	A86051	
	95C3	ASR	-	-	-	IM1360U	-	IM2657U	-	-	-	-	-	
CD133	W6B3C1	ASR	-	-	-	-	-	-	-	-	C15190	-	-	
CD146	TEA 1/34	ASR	-	-	-	A07483	-	A22364	-	-	-	-	-	
CD166	3A6	ASR	-	-	-	A22361	-	-	-	-	-	-	-	
CD184	12G5	ASR	-	-	-	A07409	-	-	-	-	-	-	-	
HLA-DR	B8.12.2 Immu-357	ASR	-	-	IM0463U	IM0464U	-	-	-	-	-	-	-	
		CE	B36291	-	-	IM1639	-	A07793	-	B49180	-	-	-	
		ASR	A74781	B00070	IM1638U	IM1639U	IM3636	IM2659U	B20024	A40579	IM3635	-	B42021	

ASR: "Analyte Specific Reagents. Analytical and performance characteristics are not established"

CE: In vitro diagnostic products compliant with EU directive 98/79/EC. CE-marked reagents are sold in European Union countries and in countries where they are compliant with local regulation (not in United States)

IVD: In Vitro Diagnostic products. IVD products are sold where they comply with applicable regulation.

RUO: "For research use only not for use in diagnostics procedure"



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