

Tab. S1 Antibodies used for flow cytometry of murine cells.

Markers	Fluorescence	Clone	Company	Dilution
Arg-1 (intracellular)	APC	polyclonal	Invitrogen	1:100
CD11b	APC-Cy7	M1/70	BD Biosciences	1:200
CD11c	Pacific Blue	N418	Biolegend	1:100
CD25	BB515	PC61	BD Biosciences	1:50
CD3	PerCP-Cy5.5	145-2C11	BD Biosciences	1:100
CD4	PE-Cy7	RM4-5	BD Biosciences	1:100
CD45	V500	30-F11	BD Biosciences	1:100
CD69	PE	H1.2F3	BD Biosciences	1:100
CD8	APC-Cy7	53-6.7	BD Biosciences	1:100
CD8	eFluor450	53-6.7	Invitrogen	1:200
CD80	Ax488	16-10A1	BD Biosciences	1:50
CD80	APC	16-10A1	BD Biosciences	1:100
CD86	BV605	GL1	BD Biosciences	1:50
CD86	BV510	GL1	BD Biosciences	1:100
F4/80	PerCP-Cy5.5	BM8	Biolegend	1:100
FoxP3 (intracellular)	APC	FJK-16s	eBioscience	1:50
Gr1	PE-Cy7	RB6-8C5	BD Biosciences	1:800
iNOS (intracellular)	Ax488	CXNFT	Invitrogen	1:200
Ly6C	PE	AL-21	BD Biosciences	1:100
MHC-II (I-A; I-E)	APC	M5/114.15.2	eBioscience	1:50
NK1.1	BV421	PK136	BD Biosciences	1:100
PD-L1	BV421	MIH5	BD Biosciences	1:100

Tab. S2 Antibodies used for flow cytometry of human cells.

Markers	Fluorescence	Clone	Company	Dilution
CD33	BV605	P67.6	BD Biosciences	1:200
CD66b	PerCP-Cy5.5	G10F5	BD Biosciences	1:200
HLA-DR	V500	G46-6	BD Biosciences	1:200
isotype control mIgG2a	Ax488	MOPC-173	BD Biosciences	1:50
Lineage cocktail (CD3, CD19, CD20, CD56)	APC	UCHT1, 3G8, HIB19, 2H7, HCD56	Biolegend	1:200
pSTAT3	Ax488	4/P-STAT	BD Biosciences	1:50

Tab. S3 Individual information on melanoma patients.

Age, years	Gender	Stage	pSTAT3 ⁺ (% of total M-MDSC)	pSTAT3 level	pSTAT3 ⁺ (% of total PMN-MDSC)	Progress	Days until progress	Last follow up, day	M-MDSC (% of live PBMC)	PMN-MDSC (% of live PBMC)
61	m	IB	61,2 %	high	14,6 %	no		657	4,47 %	0,021 %
74	m	IB	64,2 %		15,7 %	unknown			8,72 %	0,022 %
37	f	IB	85,4 %		38,5 %	unknown			7,27 %	0,11 %
80	m	IIA	71,4 %	high	15,0 %	no		719	3,30 %	0,13 %
70	m	IIB	77,5 %	high	1,95 %	no		553	4,23 %	0,050 %
63	m	IIIA	81,3 %	high	6,89 %	yes	713		5,37 %	1,69 %
78	m	IIIB	85,9 %	high	21,8 %	yes	125		9,98 %	0,016 %
79	f	IIIC	60,5 %	high	8,36 %	no		651	1,00 %	0,61 %
69	f	III	59,5 %		6,12 %	unknown			2,05 %	0,040 %
84	m	IV	69,8 %	high	7,77 %	yes	289		4,01 %	0,21 %
55	f	IV	78,9 %	high	9,35 %	yes	483		4,54 %	0,052 %
56	m	IB	47,0 %	low	26,4 %	no		722	0,35 %	0,93 %
81	m	IB	27,2 %		11,9 %	unknown			5,69 %	0,63 %
29	m	IB	19,9 %	low	16,8 %	no		698	2,06 %	0,045 %
50	m	IIC	38,2 %	low	1,29 %	no			1,72 %	0,18 %
52	f	IIIA	37,3 %	low	3,51 %	no		762	2,20 %	0,16 %
54	f	IIIA	39,1 %	low	6,94 %	no		759	1,91 %	0,091 %
59	f	IIIB	47,3 %	low	7,84 %	no		563	3,35 %	0,023 %
79	m	IIIC	54,7 %	low	17,9 %	no		352	1,97 %	0,42 %