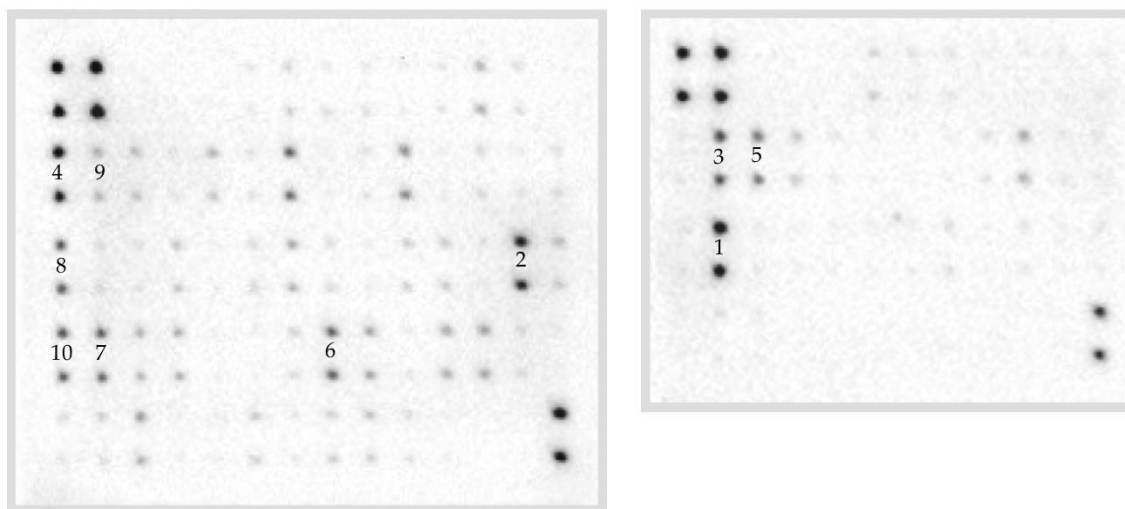


Supplementary Figure



Supplementary Figure 1. MB49-EVs contain pro-inflammatory cytokines.

Images of membranes used for the identification of cytokines contained in MB49-EVs as detected via an anti-cytokine antibody array. Indicated numbers correspond to cytokines listed in Figure 5E.

Supplementary Tables

Supplementary Table 1. Identified immune system-related proteins in MB49-EVs detected via mass spectrometry. Total proteins identified in MB49-EVs that participate in the immune system pathways as determined by a PANTHER database analysis are listed. Abundance was calculated by the mass spectrometry analysis as the sum of the peak areas for each peptide that could be integrated for the given protein.

PANTHER Immune System Pathways	Protein ID	Abundance	Protein ID	Abundance
Inflammation Mediated by chemokine and cytokine signaling	Myosin-9	179434.70	Mylk	1671.50
	Actin-b	71978.80	Camk2g	1608.30
	Integrin beta-1	66428.70	Pak3	1600.20
	Collagen 12-a1	34064.80	Itpr1	1489.80
	Collagen 6-a1	32229.90	Pak4	1371.20
	Gnai-2	29601.30	Rhoc	1282.40
	Cdc42	28249.40	Gng5	1265.50
	Collagen 2-a2	25773.10	Plcd3	1203.60
	Rac1	21712.70	Arpc5l	1189.90
	Ras2	18753.60	Akt2	1123.20
	Arpc2	15770.00	Kras	1093.90
	Arpc4	15293.80	Nfkb2	1051.10
	RhoA	15040.80	Raf1	1037.70
	Camk2d	13540.40	Stat6	729.40
	Mapk3	12887.40	Rela	656.40
	Acta2	9230.30	Nfkb1	600.60

	Rhog	9092.90	Gnao1	568.90
	Rras	7974.20	Stat3	429.00
	Gnai3	7648.40	Stat1	342.30
	Arpc1b	6673.90	Ptk2b	338.10
	Arpc5	5411.70	Akt1	327.40
	Nras	4856.40	Pla2g4a	264.60
	Cask	4472.20	Vwf	260.40
	Itga2	4113.80	Grk2	214.50
	Grb2	3951.90	Nfkbia	181.00
	Arpc3	3352.40	Itpr3	139.80
	Prkacb	3017.20	Itgb7	120.70
	Gng12	2684.80	Plcl2	102.40
	Ptgs1	1870.10	Ikbkb	54.80
	Myh10	1721.60	Adcy6	45.20
T cell activation	Cdc42	28249.40	Map2k1	1168.40
	Rac1	21712.70	Akt2	1123.20
	Mapk3	12887.40	Nfkb2	1051.10
	B2-m	8313.40	Raf1	1037.70
	CD80	5693.70	Nfkb1	600.60
	Hras	5658.60	Akt1	327.40
	Nras	4856.40	Map2k2	311.80
	Grb2	3951.90	Ppp3cb	226.30
	Ppp3ca	2530.60	Nfkbia	181.00
	Pak3	1600.20	Ptprc	176.70
	Itpr1	1489.80	Ikbkb	54.80
	CSK	1397.90		
B cell activation	Rac1	21712.70	Raf1	1037.70
	Lyn	17905.60	Nfkb1	600.60
	Mapk3	12887.40	Frk	450.90
	Ighm	9455.30	Map2k2	311.80
	Hras	5658.60	Map3k2	248.90
	NRas	4856.40	Ppp3cb	226.30
	Grb2	3951.90	Mapk12	186.40
	Ppp3ca	2530.60	Nfkbia	181.00
	Itpr1	1489.80	Ptprc	176.70
	Map2k1	1168.40	Itpr3	139.80
	Nfkb2	1051.10	Ikbkb	54.80
	Mapk3	12887.40	Rela	656.40
Toll-like receptor signaling	Tollip	3813.10	Nfkb1	600.60
	Ube2v1	3668.70	Map2k4	386.30
	Ube2n	2148.00	Map2k2	311.80
	Map2k1	1168.40	Nfkbia	181.00
	Map2k3	1147.70	IL-1rak4	69.60
	Nfkb2	1051.10	Ikbkb	54.80
	Mapk3	12887.40	Gsk3b	777.60
Interleukin signaling	Rps6ka3	4884.90	Stat6	729.40
	Nras	4856.40	Stat3	429.00
	Grb2	3951.90	Stat1	342.30
	Stat5a	1765.40	Akt1	327.40
	Akt2	1123.20	mTOR	115.90
	Raf1	1037.70	Ikbkb	54.80

Interferon-gamma signaling	Mapk3	12887.40	Stat1	342.30
	Ptpn11	1019.70	Mapk12	186.40

Supplementary Table 2. Cytokines in MB49-EVs Analyzed via Cytokine Antibody Array.

Densitometric analyses was performed using the ImageJ software to measure the intensity of staining for detected cytokines spots. The intensity of detected spots was used to determine their normalized abundance as indicated in the manufacturer's instructions.

Cytokine	Abundance	Cytokine	Abundance	Cytokine	Abundance
Osteopontin	43.69	G-CSF	5.57	VCAM-1	2.23
LIX	31.45	SCF	5.48	NEG	2.20
ICAM-1	27.03	CTACK	5.45	IGF-BP-5	2.19
Eotaxin-2	24.85	IL9	5.30	VEGF R1	2.17
IGFBP-2	17.54	MMP-2	5.25	IL1-beta	2.14
MIP-2	15.79	VEGF R2	5.13	I-TAC	1.92
MCP-1	15.75	IL3 Rb	4.91	CXCL16	1.65
IL4	14.34	Leptin R	4.78	CD30/TNFRSF8	1.50
FAS ligand	13.84	IL2	4.59	MIP-3-alpha	1.39
Lymphotactin	13.71	GITR	4.44	TIMP-1	1.35
IGF-BP-3	13.47	MDC	4.42	VEGF	1.32
L-Selectin	12.67	Flt-3 Ligand	4.23	TECK	1.20
Fractalkine	12.08	TPO	4.17	TROY	1.18
P-Selectin	11.95	DPPIV/CD26	3.81	CD30L	1.13
IL1-alpha	10.98	MIP-1-gamma	3.59	IL10	1.08
Lungkine	10.17	TARC	3.55	axl	1.07
MMP-3	9.22	Dtk	3.53	sTNF RI	1.05
IL5	8.64	TNF-alpha	3.48	IL17	0.96
PF4	8.59	IL3	3.44	CRG-2	0.94
RANTES	8.54	IL12-p40/p70	3.31	MIP-1-alpha	0.92
MIP-3-beta	8.21	Fcg RIIB	3.27	Shh-N	0.85
MCP-5	8.02	KC	3.20	IGF-II	0.77
TCA-3	7.66	sTNF RII	3.18	MIG	0.69
GM-CSF	7.09	Osteoprotegerin	3.17	CD40	0.61
M-CSF	6.39	IGF-BP-6	2.87	TSLP	0.53
IGF-I	6.39	IFN-gamma	2.75	Pro-MMP-9	0.39
HGF R	6.33	E-Selectin	2.71	Eotaxin	0.25
IL6	6.10	SDF-1-alpha	2.63	IL-7	0.11
bFGF	6.05	BLC	2.53	IL-15	0.07
Leptin	6.03	TIMP-2	2.39	IL-17B R	0
IL12-p70	5.70	IL13	2.38	Resistin	0
VEGF R3	5.60	Thymus CK-1	2.24	TRANCE	0