Styrene maleic acid recovers proteins from mammalian cells and tissues while avoiding significant cell death

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Supplementary Figures

HUMAN CF-1	HUMAN CF-2	HUMAN CF-3	HUMAN VSMC-1	HUMAN VSMC-2	HUMAN VSMC-3	PBS-1	PBS-2	PBS-3
P60709	P60709	P60709	P68032	P68032	P23528		P01308	Q9P225
P27348	P63104	P63261	P60709	P60709	P09382			
P63104	P12814	P63104	P63261	P63261	P04075			
P12814	P02768	Q9BYX7	P62258	P62258	P00338			
O43707	P08758	P12814	P27348	Q9BYX7	P06733			
P08758	P04075	P02768	P63104	P12814	P60174			
P04075	Q05682	O43707	Q9BYX7	P68133	P14618			
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P23528	P04406	P04075	P12814	P63267	P04406			
P04406	P04792	Q05682	P68133	P02768	P63104			
P50395	P11142	P27797	P62736	O43707	P37802			
P04792	P08238	P23528	P63267	P04075	P09211			
P11142	P07195	Q9Y281	P02768	Q05682	P04792			
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P21980	P18206	P0CG38	P11021	P00441	P11142			
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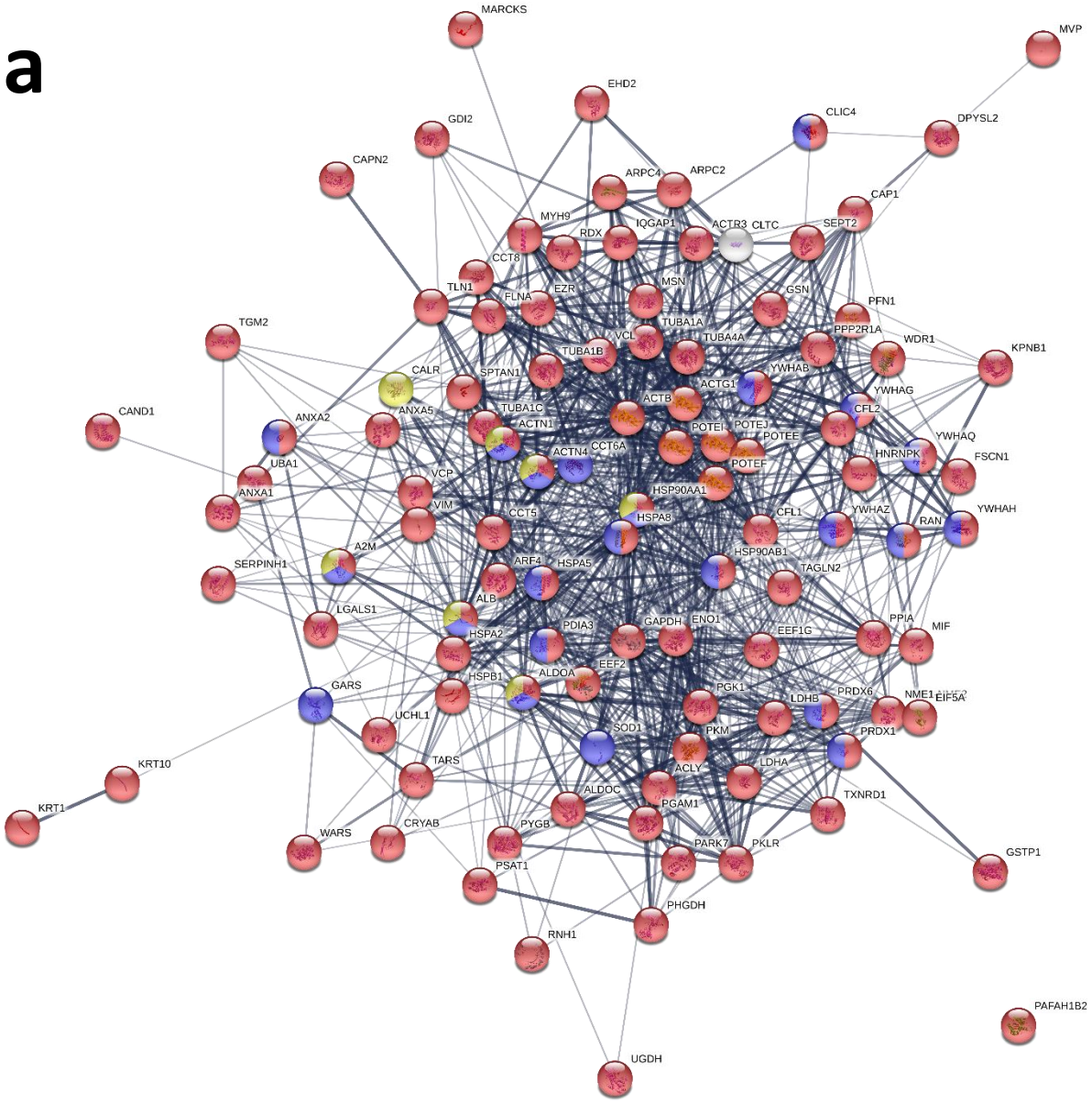
Supplementary Figure 1. List of proteins sampled by SMA in human CFs and VSMCs, with few or no proteins sampled in the absence of SMA. Mass spectrometry identified 45-105 individual proteins in each sample obtained with 6.25 ppm SMA (applied for 10 minutes at 37°C in a humidified incubator), based on at least 2 unique peptide identifications for every protein. Proteins per sample: 73.0±17.4 (CF samples); 78.7±3.3 (VSMC samples); 75.8±8.0 (all cell samples).

a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ACTR3
CLTC
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CCT8
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EZR
MSN
GSN
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TGM2
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GARS
PGK1
LDHB
PRDX6
NME1
EIF5A
UCHL1
SOD1
PKM
PRDX1
KRT10
TARS
ACLY
LDHA
KRT1
ALDOC
PGAM1
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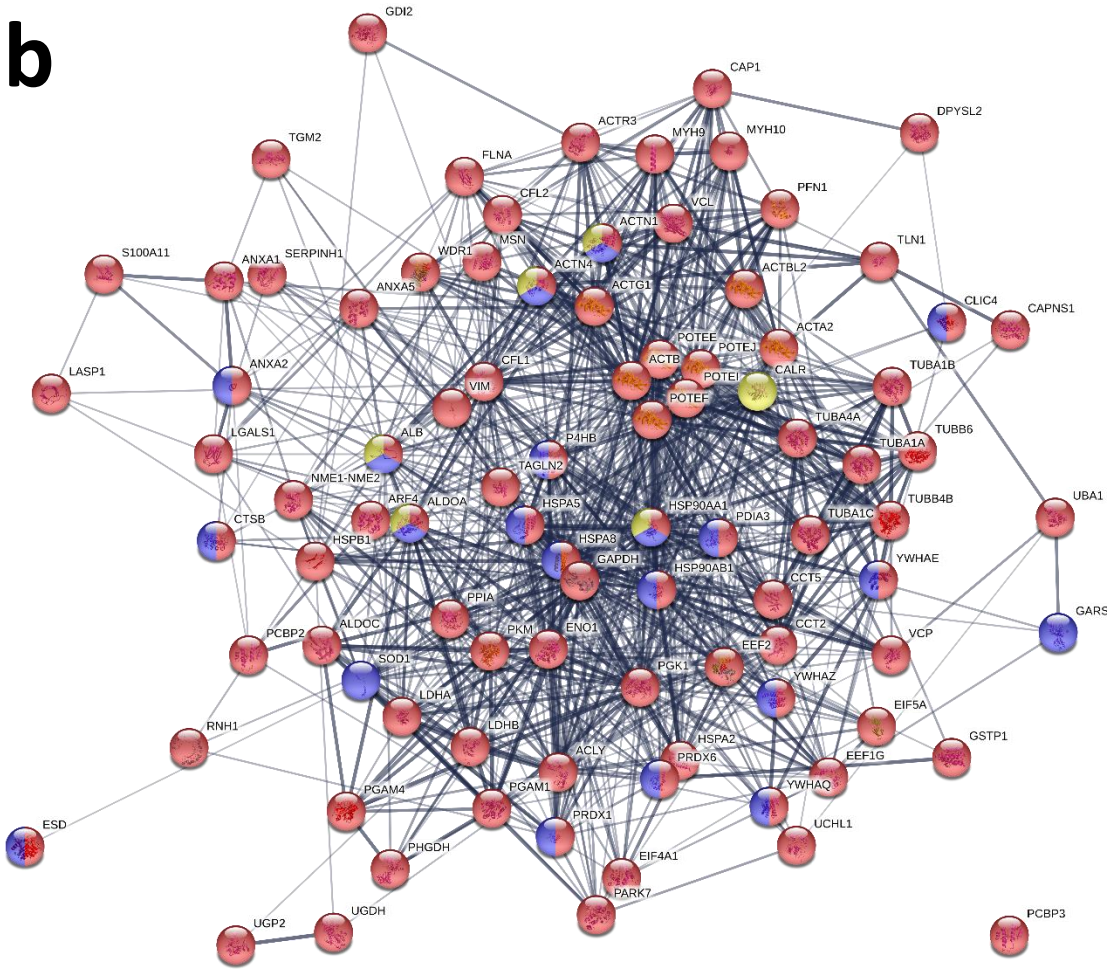
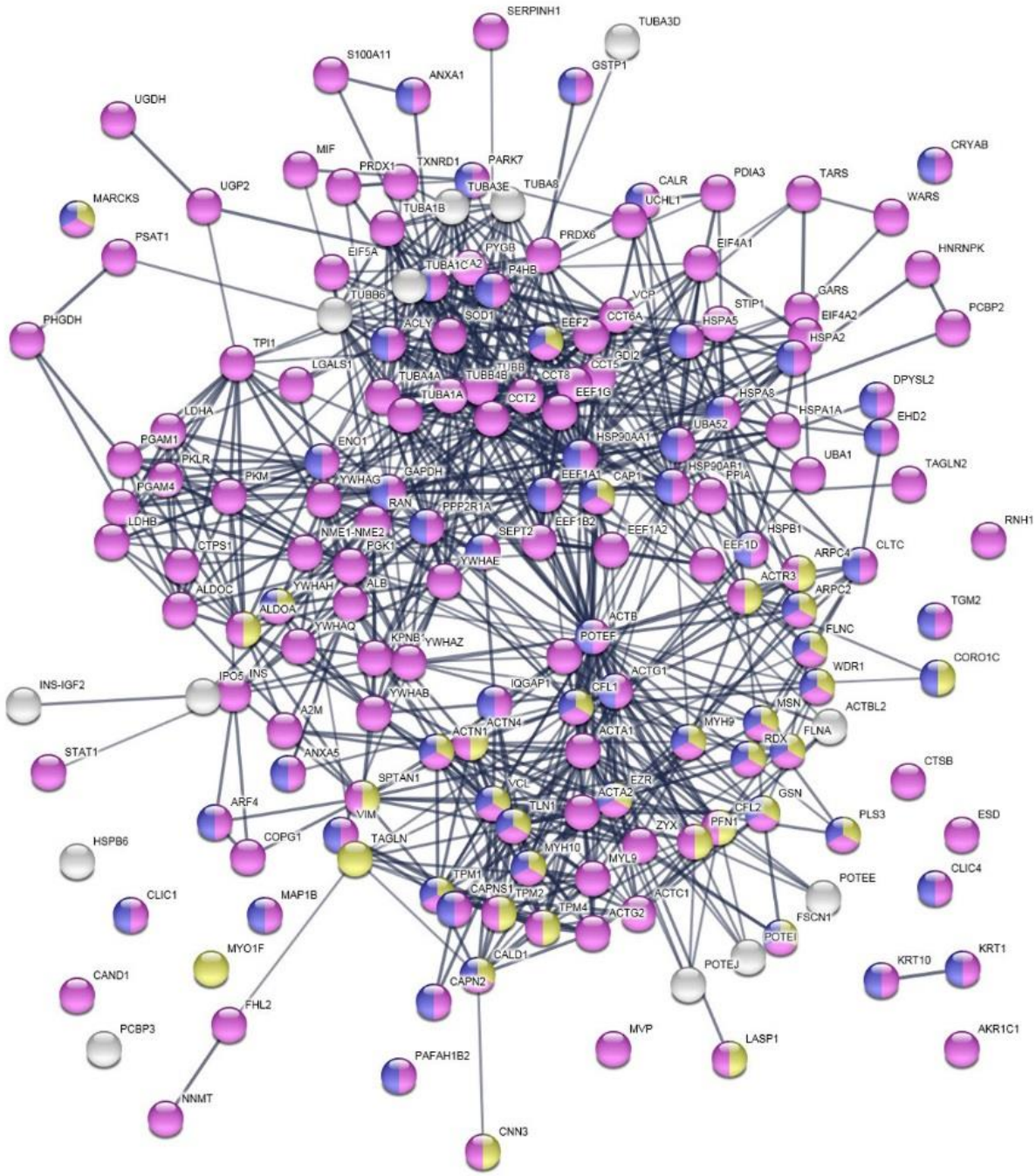


Supplementary Figure 2. STRING analysis of protein-protein interactions of extracellular vesicle-associated proteins sampled by SMA in human (a) CFs and (b) VSMCs. Mass spectrometry identified 110 proteins associated with extracellular vesicles in human CF and 92 proteins in VSMCs that were obtained by 6.25 ppm SMA: membrane bound vesicle (red); cytoplasmic membrane-bound vesicle (blue); cytoplasmic membrane-bound vesicle lumen (yellow). Line thickness indicates confidence of interaction.



Supplementary Figure 3. Map of proteins sampled by SMA in rat aorta *ex vivo*.

Mapping of identified proteins from intact tissue using SMA extraction by STRING analysis. Subcellular localisation indicated as follows: cytoplasm (purple, 152 proteins); plasma membrane (blue, 61 proteins); actin-associated (yellow, 36 proteins). Line thickness indicates confidence of protein-protein interaction, a confidence threshold of 0.7 (high confidence) was used for all indicated interactions.