

**Supplemental Table 1. Analytes Evaluated as Possible Biomarkers for Predicting CRT Response; Discovery, Validation and Full Analysis Phases of Samples from the SMART-AV Trial**

Analyte					Discovery (25 resp / 25 non- resp)					Validation (25 resp / 25 non- resp)		Full Analysis (390 resp / 388 non- resp)	
Name	Assay Type	Cat. #	Manufacturer	Biological Function	% undetectable	intra-assay	inter-assay	AUC	correlation	AUC	correlation	AUC	correlation
ST2/IL1RL1	ELISA	DST200	R&D Systems	Cytokine Receptor	0%	16%	10%	0.631	0.114	0.627	0.127	0.582	0.105
sTNF RII	MSA	HSCR-32K	Millipore	Cytokine Receptor	0%	13%	12%	0.59	0.115	0.591	0.113	0.573	0.026
CRP	ELISA	DCP00	R&D Systems	Acute Phase Protein	0%	39%	17%	0.641	0.362	0.59	0.184	0.569	0.074
NTproBNP (8-29)	EIA	04-BI-20852	ALPCO Immuno.	Neuro-hormone	0%	42%	24%	0.711	0.292	0.652	0.235	0.545	0.079
MMP-2	MSA	LMP000	R&D Systems	Matrix Remodeling	0%	19%	58%	0.709	0.401	0.507	0.003	0.542	0.072
TIMP-2	MSA	LKT003	R&D Systems	Matrix Remodeling	0%	8%	34%	0.512	0.035			0.53	0.041
sgp130	MSA	HSCR-32K	Millipore	Cytokine Receptor Complex	0%	9%	28%	0.518	0.116	0.542	0.119	0.528	0.028
TIMP-1	MSA	LKT003	R&D Systems	Matrix Remodeling	2%	19%	25%	0.554	0.091	0.51	-0.126	0.526	0.018
sIL-2R $\alpha$ /CD25	MSA	HSCR-32K	Millipore	Cytokine Receptor	2%	24%	41%	0.525	0.1	0.532	0.1	0.52	-0.005
TIMP-4	MSA	LKT003	R&D Systems	Matrix Remodeling	0%	13%	13%	0.667	0.006			0.52	-0.007
MMP-9	MSA	LMP000	R&D Systems	Matrix Remodeling	0%	11%	41%	0.594	0.234	0.513	-0.01	0.506	0.035
IFN $\gamma$	MSA	MPXHCYTO-60KP	Millipore	Cytokine	0%	52%	104%	0.682	0.111	0.587	0.002	0.501	0.044
sVCAM-I	MSA	HCVD1-67AK	Millipore	Cell Adhesion Molecule	0%	14%	22%	0.503	-0.123	0.63	0.113		
sIL-4R	MSA	HSCR-32K	Millipore	Cytokine Receptor	0%	10%	47%	0.613	0.193	0.557	0.053		
IL-12 (p70)	MSA	MPXHCYTO-60KP	Millipore	Cytokine	56%			0.555	0.239	0.542	0.015		
GDF-15	ELISA	DGD150	R&D Systems	Growth Factor	0%	11%	24%	0.586	0.159	0.523	0.062		
G-CSF	MSA	MPXHCYTO-60KP	Millipore	Growth Factor	4%	57%	84%	0.541	0.0235	0.511	0.118		
sVAP-1	ELISA	RBMS259R	Biovendor	Cell Adhesion Molecule	0%	15%	8%	0.595	0.141				
sE-Selectin	MSA	HCVD1-67AK	Millipore	Cell Adhesion Molecule	0%	13%	22%	0.588	-0.062				
VEGF	MSA	MPXHCYTO-60KP	Millipore	Growth Factor	0%	27%	57%	0.585	0.073				
ICTP	EIA	5892	OrionDiagnostic a	Matrix Remodeling	0%	21%	38%	0.573	0.156				
Eotaxin/CCL11	MSA	MPXHCYTO-60KP	Millipore	Chemokine	0%	29%	85%	0.57	0.056				
MMP-8	MSA	LMP000	R&D Systems	Matrix Remodeling	0%	14%	43%	0.567	0.09				
TNF $\alpha$	MSA	MPXHCYTO-60KP	Millipore	Cytokine	0%	33%	41%	0.549	-0.138				
sIL-1RII/sCD121b	MSA	HSCR-32K	Millipore	Cytokine Receptor	0%	15%	19%	0.546	-0.033				
sICAM-I	MSA	HCVD1-67AK	Millipore	Cell Adhesion Molecule	0%	19%	91%	0.544	-0.033				

Analyte					Discovery					Validation		Full Analysis	
					(25 resp / 25 non-resp)					(25 resp / 25 non-resp)		(390 resp / 388 non-resp)	
Name	Assay Type	Cat. #	Manufacturer	Biological Function	% undetectable	intra-assay CV (max)	inter-assay CV (max)	AUC	correlation	AUC	correlation	AUC	correlation
MIP-1 $\beta$ /CCL4	MSA	MPXHCYTO-60KP	Millipore	Chemokine	0%	8%	71%	0.543	-0.098				
sVEGFR2	MSA	HSCR-32K	Millipore	Growth Factor Receptor	0%	16%	23%	0.542	-0.005				
TGF $\beta$ 1	MSA	LKT001	R&D Systems	Growth Factor	0%	74%	86%	0.538	0.08				
sTNF RI	MSA	HSCR-32K	Millipore	Cytokine Receptor	0%	16%	30%	0.537	0.008				
IGF-1	ELISA	DG100	R&D Systems	Growth Factor	0%	33%	45%	0.534	-0.328				
PAI-1	MSA	HCVD1-67AK	Millipore	Matrix Remodeling	0%	19%	47%	0.532	-0.211				
MCP-1/CCL2	MSA	MPXHCYTO-60KP	Millipore	Chemokine	0%	29%	65%	0.529	0.005				
IP-10/CXCL10	MSA	MPXHCYTO-60KP	Millipore	Chemokine	0%	30%	71%	0.528	-0.183				
sIL-6R	MSA	HSCR-32K	Millipore	Cytokine Receptor	0%	15%	23%	0.527	-0.02				
MDC/CCL22	MSA	MPXHCYTO-60KP	Millipore	Chemokine	0%	18%	42%	0.522	0.123				
sEGFR	MSA	HSCR-32K	Millipore	Growth Factor Receptor	0%	19%	17%	0.52	0.023				
Endoglin	ELISA	DNDG00	R&D Systems	Cytokine Receptor Complex	0%	14%	10%	0.518	0.035				
TGF $\beta$ 2	MSA	LKT001	R&D Systems	Cytokine	0%	51%	65%	0.504	0.038				
GRO	MSA	MPXHCYTO-60KP	Millipore	Chemokine	2%	10%	29%	0.549	-0.034				
FGF-2	MSA	MPXHCYTO-60KP	Millipore	Growth factor	2%	23%	46%	0.519	0.072				
MMP-3	MSA	LMP000	R&D Systems	Matrix Remodeling	2%	9%	14%	0.501	-0.144				
MPO	MSA	HCVD1-67AK	Millipore	peroxidase	4%	8%	142%	0.613	-0.095				
IL-8	MSA	MPXHCYTO-60KP	Millipore	Chemokine	4%	26%	84%	0.584	0.004				
GM-CSF	MSA	MPXHCYTO-60KP	Millipore	Growth Factor	4%	42%	68%	0.55	0.033				
MCP-3/CCL7	MSA	MPXHCYTO-60KP	Millipore	Chemokine	8%	10%	34%	0.697	0.12				
MMP-1	MSA	LMP000	R&D Systems	Matrix Remodeling	8%	21%	42%	0.535	-0.174				
Fibronectin	EIA	RBMS2028R	Biovendor	Matrix Remodeling	14%	33%	40%	0.58	-0.098				
IL-1ra	MSA	MPXHCYTO-60KP	Millipore	Cytokine	22%	60%	101%	0.587	0.099				
EGF	MSA	MPXHCYTO-60KP	Millipore	Growth Factor	24%	17%	71%	0.595	0.153				
IL-17	MSA	MPXHCYTO-60KP	Millipore	Cytokine	36%	24%	63%	0.7	0.105				
TGF $\alpha$	MSA	MPXHCYTO-60KP	Millipore	Growth Factor	42%	13%	6%	0.607	0.03				

Analyte					Discovery					Validation		Full Analysis	
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MIP-1 $\alpha$ /CCL3	MSA	MPXHCYTO-60KP	Millipore	Chemokine	44%	NC	NC	0.714	-0.3				
MMP-12	MSA	LMP000	R&D Systems	Matrix Remodeling	50%	NC	NC	0.565	0.029				
IL-7	MSA	MPXHCYTO-60KP	Millipore	Cytokine	52%	NC	NC	0.591	-0.063				
MMP-13	MSA	LMP000	R&D Systems	Matrix Remodeling	54%	NC	NC	0.639	0.327				
TNF $\beta$	MSA	MPXHCYTO-60KP	Millipore	Growth Factor	54%	NC	NC	0.612	-0.022				
IL-15	MSA	MPXHCYTO-60KP	Millipore	Cytokine	54%	NC	NC	0.558	-0.023				
Fractalkine/CX3CL1	MSA	MPXHCYTO-60KP	Millipore	Chemokine	54%	NC	NC	0.519	0.047				
IL-3	MSA	MPXHCYTO-60KP	Millipore	Cytokine	56%	NC	NC	0.618	0.098				
IL-2	MSA	MPXHCYTO-60KP	Millipore	Cytokine	58%	NC	NC	0.62	-0.045				
IL-10	MSA	MPXHCYTO-60KP	Millipore	Cytokine	62%	NC	NC	0.525	-0.3				
IL-9	MSA	MPXHCYTO-60KP	Millipore	Cytokine	62%	NC	NC	0.506	0.037				
IL-5	MSA	MPXHCYTO-60KP	Millipore	Cytokine	64%	NC	NC	0.621	-0.007				
IL-1 $\beta$	MSA	MPXHCYTO-60KP	Millipore	Cytokine	64%	NC	NC	0.556	-0.088				
IL-6	MSA	MPXHCYTO-60KP	Millipore	Cytokine	66%	NC	NC	0.65	-0.079				
IL-1 $\alpha$	MSA	MPXHCYTO-60KP	Millipore	Cytokine	68%	NC	NC	0.641	-0.087				
Flt-3 ligand	MSA	MPXHCYTO-60KP	Millipore	Cytokine	68%	NC	NC	0.556	0.053				
IL-13	MSA	MPXHCYTO-60KP	Millipore	Cytokine	68%	NC	NC	0.545	-0.092				
Adiponectin	MSA	HCV D1-67AK	Millipore	Hormone	73%	NC	NC	0.517	-0.171				
IL-4	MSA	MPXHCYTO-60KP	Millipore	Cytokine	80%	NC	NC	0.54	-0.156				
Troponin-I	ELISA	EA-0301	Signosis Inc	Myocyte Injury	100%	NC	NC						
TGF $\beta$ III	MSA	LKT001	R&D Systems	Cytokine	100%	NC	NC						
TIMP-3	MSA	LKT003	R&D Systems	Matrix Remodeling	100%	NC	NC						
<b>Count</b>					<b>74</b>					<b>15</b>		<b>12</b>	

NC: Not Computed