

Name	Company	Cat. #	Avg. CV	Correlation	Corr. Overlap	SampleS/B 543	Control S/I 543
anti- α -fetoprotein (ab #1)	Biotrend	4F16	0.11	0.95	138	29.12	0.41
anti- α -fetoprotein (ab #2)	Sigma	A8452	0.16	0.79	138	50.10	17.36
anti- α -1 antichymotrypsin	Fitzgerald	10-A08				66.71	79.68
anti- α -2 antiplasmin	Cedarlanes	CL20005AP	0.14	0.88	138	52.28	0.12
anti-Albumin	Fitzgerald	10-A75	0.18	0.52	138	52.75	3.87
anti-Alkaline phosphatase	Biotrend	0300-0430	0.13	0.95	136	51.97	1.00
anti-Alpha 2-macroglobulin	Sigma	M1893	0.11	0.90	138	69.72	0.27
anti-Alpha-1-antitrypsin (ab #1)	Biotrend	0640-5507	0.14	0.83	137	58.01	1.30
anti-Alpha-1-antitrypsin (ab #2)	GenWay	A10066F	0.15	0.84	138	42.91	0.80
anti- β 2-Microglobulin	USBiological	M3890-05X				54.45	85.30
anti-CA125 (ovarian cancer antigen)	USBiological	C0050-01	0.15	0.75	138	24.85	0.11
anti-CA15-3 (breast cancer antigen MUC1)	USBiological	C0050-23	0.11	0.90	138	21.33	0.04
anti-CA19-9 (cancer antigen Sialyl Lewis A) (ab #1)	USBiological	C0075-07	0.12	0.87	135	27.88	0.60
anti-CA19-9 (cancer antigen Sialyl Lewis A) (ab #2)	USBiological	C0075-27				37.31	0.59
anti-Catalase	AbCam	ab1877	0.12	0.92	138	55.66	0.31
anti-Cathepsin D	R&D Systems	AF1014	0.11	0.98	137	43.03	0.23
anti-Caveolin-1	Sigma	C3237	0.17	0.89	138	37.35	1.13
anti-CD26 (dipeptidyl peptidase IV)	USBiological	C2277-10X	0.16	0.81	138	45.85	3.97
anti-CEA (carcinoembryonic antigen)	USBiological	C1299-94	0.11	0.89	138	30.13	0.63
anti-Ceruloplasmin	Sigma	C0911	0.11	0.97	134	25.82	0.02
anti-Chorionic gonadotropin	AbCam	ab9502	0.16	0.87	130	22.03	1.36
anti-CKBB (creatine kinase BB isoenzyme)	USBiological	C7910-16	0.19	0.90	136	24.56	0.73
anti-Complement C3	Sigma	C7761	0.10	0.88	138	49.51	0.42
anti-Complement C5	USBiological	C7850-24	0.12	0.89	138	53.71	0.19
anti-CRP (C reactive protein) (ab #1)	Sigma	C1688	0.13	0.87	138	36.05	0.29
anti-CRP (C reactive protein) (ab #2)	USBiological	C7907-10	0.18	0.98	107	45.50	0.50
anti-Ferritin	USBiological	F4015-17	0.14	0.97	131	37.88	3.61
anti-Gelsolin	Sigma	G4896	0.15	0.82	124	18.25	0.05
anti-GST (glutathione S transferase)	USBiological	G8135-05	0.18	0.91	136	40.35	0.12
anti-Haptoglobin	Biotrend	4890-0004	0.17	0.86	137	38.68	1.45
anti-HC II (heparin cofactor II)	Cedarlanes	CL20070AP	0.21	0.84	138	52.31	0.10
anti-Hemoglobin	Bethyl	E80-135 (kit component)	0.12	0.94	137	51.81	0.12
anti-HGF (hepatocyte growth factor)	R & D Systems	MAB294	0.13	0.86	138	43.72	1.82
anti-IgA	Bethyl	E80-102 (kit component)	0.15	0.82	136	90.69	0.31
anti-IGFBP-3 (insulin-like growth factor binding protein)	R & D Systems	MAB305	0.10	0.92	134	26.31	0.44
anti-IGF-I (insulin-like growth factor)	R&D Systems	AF-291-NA	0.32	0.89	136	35.61	0.16
anti-IgG1	Zymed Laboratories	05-3300	0.11	0.91	138	85.58	0.37
anti-IgG-Fc	Bethyl	E80-104 (kit component)	0.14	0.81	138	116.30	1.64
anti-IgM	Jackson Immunoresearch	109-005-043	0.15	0.90	138	90.48	22.38
anti-IL-1 α (ab #1)	Research Diagnostics	RDI-IL1AabrP	0.16	0.88	137	26.64	0.19
anti-IL-1 α (ab #2)	GenWay	A22493	0.21	0.91	138	31.22	0.14
anti-IL-1 β	Research Diagnostics	RDI-IL1BabrP	0.21	0.77	92	8.56	0.02
anti-IL-2	R & D Systems	MAB202	0.10	0.92	138	26.50	0.18
anti-IL-2 R α	R & D Systems	MAB223	0.10	0.92	128	24.25	0.41
anti-IL-6 (ab #1)	Sigma	I7901	0.15	0.72	92	16.76	0.29
anti-IL-6 (ab #2)	R & D Systems	MAB206	0.11	0.90	126	21.36	0.42

	R & D Systems	AF-227-NA	0.10	0.89	138	40.33	0.40
anti-IL-6 sR							
anti-IL-8 (ab #1)	R & D Systems	AB-208-NA	0.20	0.71	137	31.00	0.97
anti-IL-8 (ab #2)	GenWay	A21030F	0.17	0.94	136	28.37	0.05
anti-IL-10 (ab #1)	R & D Systems	MAB217	0.14	0.82	138	41.39	0.92
anti-IL-10 (ab #2)	GenWay	A21031F	0.18	0.94	102	20.97	0.11
anti-KRT18 (keratin, type I cytoskeletal 18)	GenWay	A22753	0.17	0.94	138	30.62	0.87
anti-Laminin (ab #1)	Sigma	L 8271	0.11	0.93	138	38.49	0.04
anti-Laminin (ab #2)	GenWay	A20044F	0.16	0.90	138	37.99	0.18
anti-Lipase	USBiological	L2496-02	0.18	0.90	138	35.04	0.49
anti-M2-PK (pyruvate kinase type M2)	Scehbo	S-1	0.19	0.80	127	19.77	0.80
anti-MCP-1 (monocyte chemoattractant protein)	Genex Bioscience Inc.	GEA6043-2	0.12	0.93	138	50.75	0.28
anti-MPM2 (Ser/Thr, Pro, phosphorylated mitotic protein)	USBiological	M4685	0.18	0.67	138	36.53	0.26
anti-Ornithine decarboxylase	Neomarkers	MS-464-P1ABX	0.13	0.83	138	46.81	0.92
anti-PAI-1 (plasminogen activator inhibitor type-1)	Cedarlanes	CL20140A	0.16	0.96	136	38.50	0.25
anti-PIVKA-II (protein induced vitamin K antagonist)	Crystal Chem Inc.	08040	0.18	0.93	138	40.45	0.82
anti-Plasminogen	USBiological	P4256-27A	0.16	0.81	138	40.61	1.04
anti-Serum amyloid A	AbCam	ab687	0.20	0.88	138	28.34	0.09
anti-sTNFR (soluble tumor necrosis factor receptor 1)	USBiological	T9162	0.19	0.82	133	18.70	0.05
anti-Thioredoxin	Medical & Biological Laboratories	M063-3	0.17	0.75	138	45.15	1.75
anti-TIMP-1 (tissue inhibitor of matrix metalloproteinases-1)	BIOMOL	SA-373	0.15	0.90	138	30.73	0.53
anti-TNF α	Oncogene Research	GF31	0.16	0.77	138	40.08	0.67
anti-Transferrin	Bethyl	E80-128 (kitcomponent)	0.14	0.76	138	71.30	0.15
anti-Troponin I	Chemicon	MAB1691	0.13	0.89	138	42.64	1.30
anti-TSP-1 (thrombospondin-1)	Neomarkers	MS-419-P1ABX	0.11	0.88	138	20.54	-0.01
anti-VEGF (vascular endothelial growth factor)	Sigma	V4758	0.18	0.71	138	39.22	1.46
anti-von Willebrand Factor	DAKO	A0082	0.19	0.82	138	40.56	1.64

Supplemental Table 1. Antibodies used and a summary of performance characteristics. The average CVs, correlations, and average S/Bs (543 channel only) were calculated as described in the text. The “correlation overlap” column refers to the number of samples that both gave measurable data in both experiment sets (out of 138 possible). The “Control S/B” column gives the average S/B of each antibody in the negative control experiments, in which unlabeled sera were incubated on the arrays.

Healthy vs. Cancer		
Method 1	Method 2	Method 3
anti-CRP (ab #2) anti-Gelsolin anti-IgA anti-IL-1 β anti-IL-6 (ab #1) anti-PIVKA-II anti-Plasminogen anti-Troponin T	anti- α -2 antiplasmin anti-Alpha-1-antitrypsin (ab #1) anti-Alpha-1-antitrypsin (ab #2) anti-Cathepsin D anti-Complement C5 anti-CRP (ab #2) anti-Gelsolin anti-Haptoglobin anti-IgA anti-IL-6 (ab #1) anti-PIVKA-II anti-Plasminogen anti-Troponin T	anti-Alpha-1-antitrypsin (ab #2) anti-CRP (ab #2) anti-Gelsolin
Healthy vs. Benign		
Method 1	Method 2	Method 3
anti-Alkaline phosphatase anti-CRP (ab #2) anti-PAI-1 anti-Plasminogen anti-Serum amyloid A	anti- α -2 antiplasmin anti-CRP (ab #2) anti-IgA anti-Plasminogen anti-TIMP-1	anti-CRP (ab #2) anti-Plasminogen
Cancer vs. Benign		
Method 1	Method 2	Method 3
None	anti-Serum amyloid A	anti-CRP (ab #1) anti-Serum amyloid A

Supplemental Table 2. Antibodies used in both sets by each method. For each comparison, the antibodies are listed that were used in the classifiers by each method in both set one and set two.

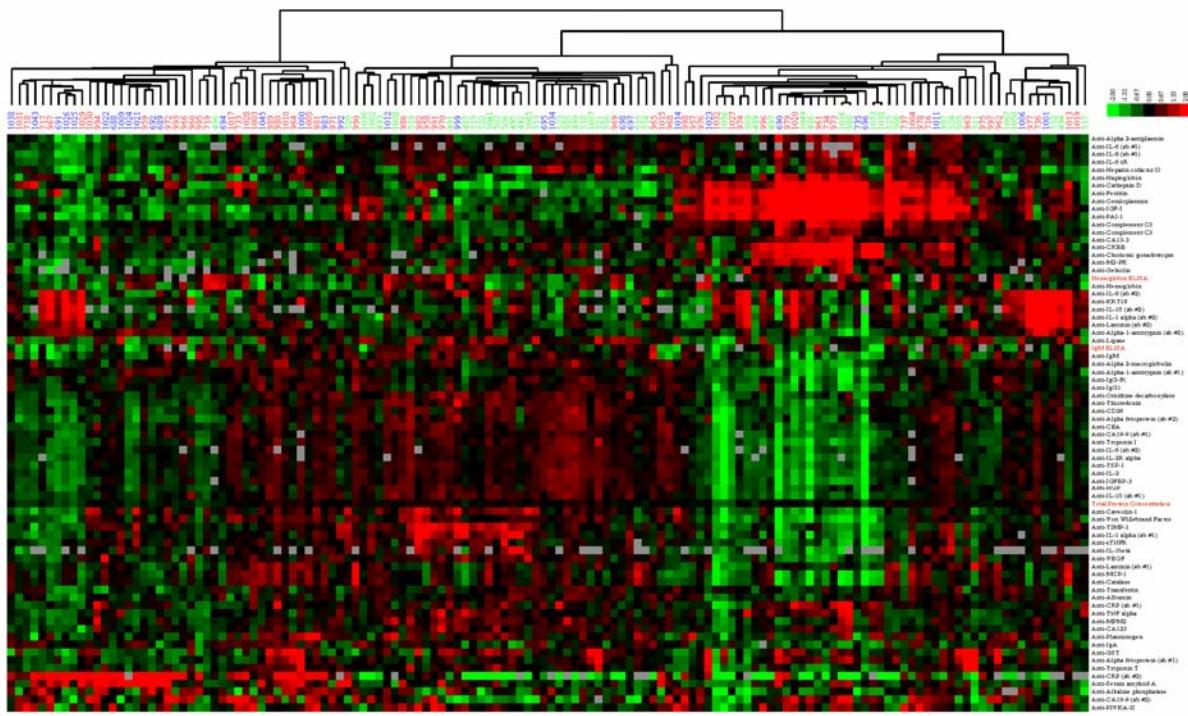


Figure 1

Two-way hierarchical clustering of the microarray data from set 4. Microarray data from 138 serum samples (horizontal axis) and 71 reproducible antibodies (vertical axis) were logged and median centered prior to clustering. The color of the column labels indicates the clinical category of the patient from which the serum was taken: red = pancreatic adenocarcinoma, blue = benign diseases and green = healthy controls. Independently-collected ELISA measurements are included for the proteins IgM and hemoglobin (row labels colored red). The total protein concentration of each serum sample was also included in the cluster.

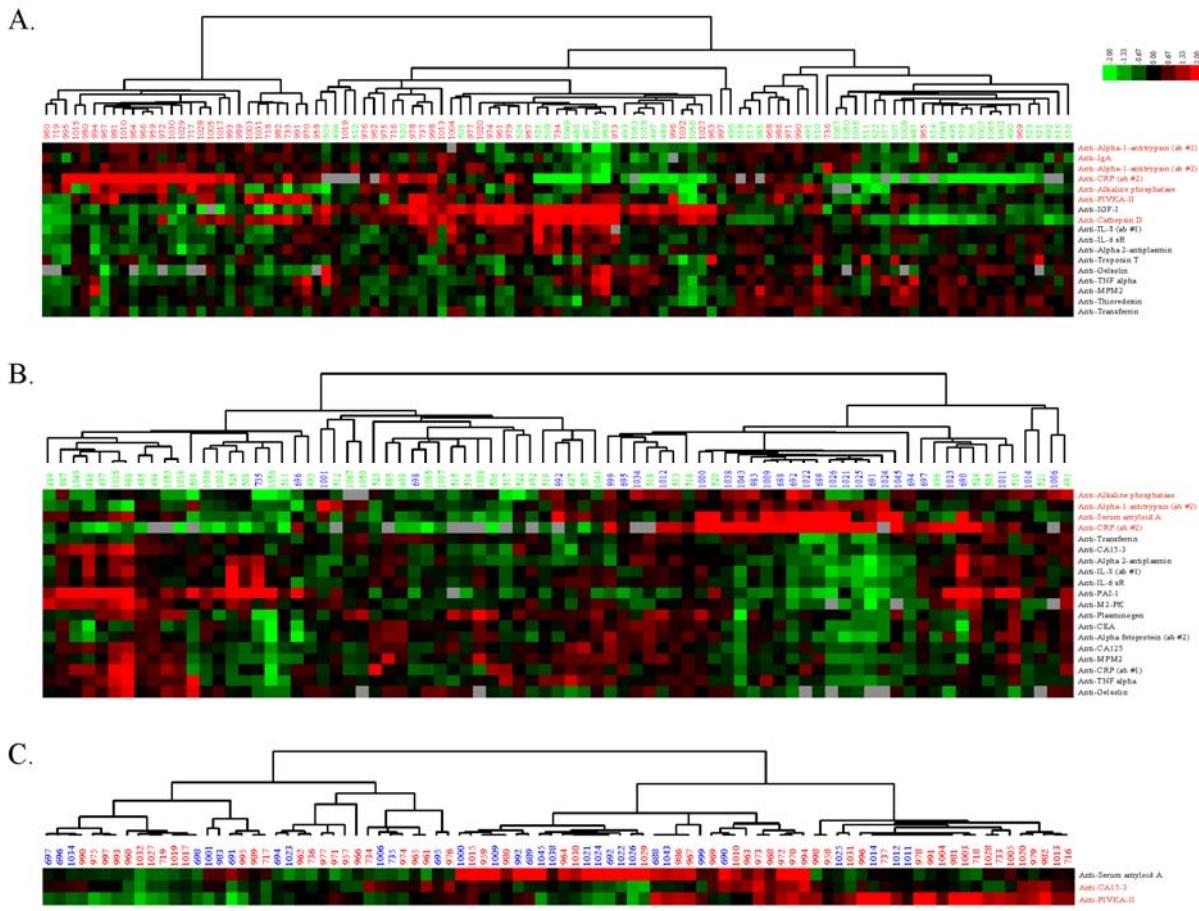


Figure 2

Two-way hierarchical clustering of antibody response that discriminates between patient classes in both experiment set 3 and experiment set 4 with $p < 0.05$. Healthy control, pancreatic cancer, and benign disease groups are designated with green, red, and blue labels, respectively. Antibodies highlighted in red indicate higher response in cancer patients versus healthy controls, benign patients versus healthy controls, and cancer patients versus benign patients for Figures A, B, and C, respectively.