Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

Symbol	Name	Patients	Controls	Ratio
HLA-DRA	Major histocompatibility complex, class II, DR alpha	45%	7%	6.22
DSC3	Desmocollin 3 isoform Dsc3a preproprotein	44%	7%	6.12
DSC1	Desmocollin 1 isoform Dsc1a preproprotein	44%	7%	6.06
ATP2C1-V4	ATPase, Ca++ transporting, type 2C	43%	5%	8.51
PKP3	Plakophilin 3	43%	7%	6.56
CHRM3	Cholinergic receptor, muscarinic 3	42%	7%	5.85
COL21A1	Collagen, type XXI, alpha 1	42%	5%	8.36
ANXA8L1	AnnexinA8 like 1	42%	6%	7.19
CD88, C5AR1	Complement component 5a receptor 1 (C5AR1), mRNA	42%	5%	8.21
CHRNE	Cholinergic receptor, nicotinic,epsilon	41%	7%	5.70
ITGA2	IntegrIn alpha 2 precursor	39%	6%	6.80
PCDH12	Protocadherin 12 precursor	39%	7%	6.04
CD1D	CD1d molecule	39%	7%	5.38
ITGB5	Integrin, beta 5	39%	6%	6.73
HLA-DQB1	Major histocompatibility complex, class II, DQ beta 1	38%	7%	5.23
COL2A1	Collagen, type II, alpha 1	38%	7%	5.75
CD59	CD59 molecule, complement regulatory protein	37%	7%	5.63
DSG3-EC4	Desmoglein 3	36%	7%	5.58
CD44	CD44 molecule (Indian bloodGroup)	36%	6%	6.21
CD80	CD80 molecule	36%	5%	7.09
CHRM1	Cholinergic receptor, muscarinic 1	36%	6%	6.21
ANXA5	Annexin 5	36%	5%	7.02
HLA-DQA1	Major histocompatibility complex, class II, DQ alpha 1	36%	7%	5.46
CD23, FCER2	Fc fragment of IgE, low affinity II, receptor for (CD23)	35%	7%	5.40
ITGB3BP-V1	Integrin beta 3 binding protein, isoform 1	34%	6%	5.95
CD86	CD86 molecule-costimulatory signal for activation of the T-cell	34%	6%	5.88
DSC3	Desmocollin 3 isoform Dsc3a preproprotein	34%	6%	5.88
HLA-G	Major histocompatibility complex, class I,G	34%	6%	5.88
HLA-DRB1	Major histocompatibility complex, class II, DR beta 1	33%	7%	5.11
CD49e, ITGA5	Integrin, alpha 5 (fibronectin receptor, alpha polypeptide)	33%	4%	8.99
COL1A1	Collagen, type I, alpha 1	33%	4%	7.49
IL1RAPL2	InterleukIn 18 receptor accessory proteIn	33%	5%	6.42
CD26, DPP4	Dipeptidyl-peptidase 4	32%	5%	6.35
PC	Pyruvate carboxylase	32%	5%	6.35
PMP22	Peripheral myelin protein 22	32%	3%	10.98
CACNA1C	Calcium channel, voltagedependent, L type,	31%	6%	5.42
CHRNA1	Cholinergic receptor, nicotinic, alpha 1 isoform b	31%	6%	5.42
HLA-DPA1	Major histocompatibility complex, class II, DP alpha 1	31%	6%	5.42
CD56, NCAM2	Neural cell adhesion molecule 1	31%	7%	4.76
CDH1	Cadherin 1, type 1 preproprotein	31%	7%	4.29
CHRNB4	Cholinergic receptor, nicotinic, beta 4	31%	7%	4.76
PCDHAC2	Protocadherin alpha subfamily C, 2 isoform 1	31%	6%	5.36
PERP	PerP, TP53 apoptosis effector	31%	5%	6.05
PMPCB	Mitochondrial processing peptidase beta subunit	31%	4%	8.47
ACTA2	Actin, AlphA 2, smooth muscle, AortA	30%	6%	5.23
CHRNA5	Cholinergic receptor, nicotinic, alpha 5	30%	7%	4.65
OGFR	OpioidGrowth factor receptor	30%	4%	6.88
PDHA1	Pyruvate dehydrogenase E1 component alpha subunit, somatic form	30%	3%	10.32
ANXA3	AnnexinA3	30%	7%	4.53
CHRM4	Cholinergic receptor, muscarinic 4	30%	6%	5.10
DSG1-EC5	Desmoglein 1	30%	6%	5.10
CHRM1	Cholinergic receptor, muscarinic 1	29%	6%	5.03
FCRLA	Fc receptor-like and mucin-like 1	29%	6%	5.03

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

FH	Fumarate hydratase (Fumarase)	29%	3%	10.06
MLYCD	Malonyl-CoA decarboxylase	29%	4%	8.05
PCDH10	Protocadherin 10 isoform 1 precursor	28%	4%	7.84
CACNG6	Voltagedependent calcium channelGamma6	28%	5%	5.53
CRAT	Carnitine O-acetyltransferase	28%	7%	3.87
ITGA4	IntegrIn alpha 4 precursor	28%	6%	4.84
CACNG2	Voltagedependent calcium channelGamma2	28%	7%	3.82
CD14	CD14 molecule	28%	4%	6.36
CD16a, FCGR3A	Fc fragment of IgG, low affinity IIIa, receptor (CD16a)	28%	6%	4.77
CD48	CD48 molecule	28%	7%	4.24
CD32, FCGR2B	Fc fragment of IgG, low affinity IIb, receptor (CD32)	27%	2%	12.55
ITGA7	Homo sapiens mRNA for ITGA7 variant protein, partial cds, clone: hk04261.	27%	7%	4.18
CD4	CD4 molecule	27%	4%	6.19
CHRNA10	Cholinergic receptor, nicotinic, alpha 10	27%	6%	4.64
MAOB	Amine oxidase (flavin-containing) B	27%	5%	5.30
CDH4	Cadherin 4, type 1 preproprotein	27%	5%	5.23
DSG1	Desmoglein 1	27%	7%	4.07
PANX1	pannexin 1	27%	7%	4.07
PCDHB12	Protocadherin beta 12 precursor	27%	6%	4.57
CD46	CD46 molecule, complement regulatory protein	26%	7%	4.01
JUP	Junction plakoglobin	26%	5%	5.15
COL8A1	Collagen, type VIII, alpha 1	26%	5%	5.08
CHRND	Cholinergic receptor, nicotinic, delta	25%	1%	17.51
PRODH	Proline oxidase	25%	6%	4.38
SLC6A6-V1	solute carrier family 6 (neurotransmiter)	25%	5%	5.00
DSC2	Desmocollin 2 isoform Dsc2a preproprotein	25%	6%	4.31
TGFBRAP1	TransformingGrowth factor, beta receptor	25%	6%	4.31
CD37	CD37 molecule	25%	5%	4.85
CD93	CD93 molecule	25%	5%	4.85
CDH8	Cadherin 8, type 2 preproprotein	25%	2%	11.33
CHRNB1	Cholinergic receptor, nicotinic, beta 1 subunit	25%	6%	4.25
DSG1-EC1	Desmoglein 1	25%	7%	3.78
FDXR	NADPH:adrenodoxin oxidoreductase	25%	6%	4.25
SOD3	superoxide dismutase 3, extracellular	25%	5%	4.85
CD66c, CEACAM6	Carcinoembryonic antigen-related cell adhesion molecule 6	24%	6%	4.18
CTNNA3-V2	Catenin, alpha 3	24%	6%	4.18
HLA-DQB2	Major histocompatibility complex, class II, DQ beta 2	24%	5%	4.78
NDUFA13	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 13	24%	6%	4.18
CD3E	CD3e molecule, epsilon (CD3-TCR complex)	24%	5%	4.70
CD40	CD40 molecule, TNF receptor superfamily member 5	24%	6%	4.12
CHRNA1-V1	Cholinergic receptor, nicotinic, alpha 1 isoform b	24%	6%	4.12
NMNAT2	Nicotinamide nucleotide adenylyltransferase 2	24%	6%	4.12
PDK4	Pyruvate dehydrogenase [lipoamide]] kinase isozyme 4	24%	4%	6.59
ATP2C1-V2	ATPase, Ca++ transporting, type 2C, member 1	23%	7%	3.24
HLA-E	Major histocompatibility complex, class I, E	23%	2%	10.80
ME3	NADP-dependent malic enzyme	23%	8%	2.95
FGR	Gardner-Rasheed feline sarcoma viral (v-fgr) oncogene homolog	23%	6%	3.99
SOD2	Superoxide dismutase [Mn]	23%	2%	10.63
ALDH4A1	Delta-1-pyrroline-5-carboxylate dehydrogenase	23%	5%	4.48
FRS2	FibroblastGrowth factor receptor substrate 2-	23%	3%	7.84
DSG3-EC3	Desmoglein 3	22%	6%	3.86
HLA-E	Major histocompatibility complex, class I, E	22%	4%	5.14
CHRNA5	Cholinergic receptor, nicotinic, alpha 5	22%	6%	3.79
NDUFS6	NADH-ubiquinone oxidoreductase 13 kDa-A subunit	22%	5%	4.33

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

CD63	CD63 molecule	22%	3%	7.45
CHRNA2	Cholinergic receptor, nicotinic, alpha 2	22%	5%	4.26
FLT3	Fms-related tyrosine kinase 3	22%	4%	4.97
CD79	CD79a molecule, immunoglobulin-associated alpha	21%	5%	4.18
CHRNB4-V1	Cholinergic receptor, nicotinic, beta 4	21%	4%	5.85
ETFB-V2	Electron transfer flavoprotein beta-subunit (Beta-ETF), isoform 1	21%	3%	7.32
CD64A, FCGR1A	Fc fragment of IgG, high affinity Ia, receptor (CD64)	20%	5%	4.03
CDH3	Cadherin 3, type 1 preproprotein	20%	5%	4.03
CHRM4	Cholinergic receptor, muscarinic 4	20%	4%	4.70
COL23A1	Collagen, type XXIII, alpha 1	20%	4%	4.70
COL25A1	Collagen, type XXV, alpha 1	20%	4%	5.65
NDUFA9	NADH-ubiquinone oxidoreductase 39 kDa subunit	20%	3%	7.06
ORAI1	Calcium release	20%	5%	4.03
TIMM44	Import inner membrane translocase subunit TIM44	20%	4%	5.65
CCKBR	Cholecystokinin B receptor	20%	4%	4.62
CD33	CD33 molecule	20%	1%	27.70
CD36	CD36 molecule (thrombospondin receptor)	20%	5%	3.96
CD42B, GP1BA	Glycoprotein Ib (platelet), alpha polypeptide	20%	1%	27.70
CHRNB3	Cholinergic receptor, nicotinic, beta	20%	3%	6.93
CTNNBL1	Beta catenin-like1	20%	6%	3.46
ITGA8	Integrin, alpha 8	20%	5%	3.96
ANXA9	AnnexinA9	20%	6%	3.40
CHRNE	Cholinergic receptor, nicotinic, epsilon	20%	5%	3.88
DSG3-EC5	Desmoglein 3	20%	5%	3.88
EPS8L2	EpidermalGrowth factor receptor pathway substrate 8-related protein 2	20%	6%	3.40
CD81	CD81 molecule	19%	4%	5.33
ETFA	Electron transfer flavoprotein alpha-subunit	19%	4%	4.44
CYB5B	Cytochrome b5 outer mitochondrial membrane isoform precursor	19%	1%	13.07
FCGR2B	Fc fragment of IgG, low affinity IIb, receptor	19%	5%	3.73
PCDHB5	Protocadherin beta 5 precursor	19%	4%	5.23
SYNJ2BP	Synaptojanin 2 binding protein	19%	3%	6.53
ABAT	4-aminobutyrate aminotransferase	19%	4%	4.27
CHRNB2	Cholinergic receptor, nicotinic, beta 2	19%	7%	2.85
CHRNE	Cholinergic receptor, nicotinic, epsilon	19%	5%	3.66
DSG1	Desmoglein 1	19%	7%	2.85
GK2	Glycerol kinase, testis specific 2	19%	5%	3.66
MET-V1	Homo sapiens mRNA for met proto-oncogene precursor variant protein.	19%	6%	3.20
NDUFV3-V2	NADH-ubiquinone oxidoreductase 9 kDa subunit	19%	4%	4.27
AKAP10	Protein kinase A Anchoring protein 10	18%	4%	5.02
ATP2C1-V3	ATPase, Ca++ transporting, type 2C, membe	18%	4%	5.02
CHRNA4-V1	Cholinergic receptor, nicotinic, alpha 4 subunit	18%	3%	6.27
CD100, SEMA4D	Sema domain, Ig domain, transmembrane domain and short cytoplasmic domain, (semaphorin) 4D	18%	4%	4.91
CD34	CD34 molecule	18%	6%	3.07
CD69	CD69 molecule	18%	5%	3.51
CHRNA9	Cholinergic receptor, nicotinic, alpha 9	18%	4%	4.09
CHRNB4-V2	Cholinergic receptor, nicotinic, beta 4	18%	5%	3.51
CPT1B	Carnitine O-palmitoyltransferase I, mitochondrial muscle isoform	18%	5%	3.51
DSC1	Desmocollin 1 isoform Dsc1a preproprotein	18%	7%	2.73
EPS15L1	EpidermalGrowth factor receptor pathway substrate 15-like 1	18%	6%	3.07
HLA-C_V2	Major histocompatibility complex, class I, C	18%	4%	4.91
ITGB1	Integrin beta 1 isoform 1C	18%	3%	6.14
ME2	NAD-dependent malic enzyme	18%	6%	3.07
NDUFV3	NADH-ubiquinone oxidoreductase 9 kDa subunit	18%	4%	4.91
PGR	Progesterone receptor	18%	6%	3.07

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

CHRNB1	Cholinergic receptor, nicotinic, beta 1 subunit	17%	5%	3.44
CTNNBIP1	Catenin, beta interacting protein 1	17%	4%	4.01
ACTA1	Actin, AlphA 1, skeletAl muscle	17%	6%	2.94
CTNNAL1	Catenin, alpha-like 1	17%	4%	4.70
NDUFB10	NADH-ubiquinone oxidoreductase PDSW subunit	17%	2%	7.84
PCDHB15	Protocadherin beta 15 precursor	17%	4%	3.92
DSG1	Desmoglein 1	17%	5%	3.36
BDKRB2	Bradykinin receptor B2	17%	4%	3.83
CD19	CD19 molecule	17%	5%	3.29
CD3E	CD3e molecule, epsilon (CD3-TCR complex)	17%	4%	3.83
CD40_V2	CD40 molecule, TNF receptor superfamily member 5	17%	6%	2.88
CDH9	Cadherin 9, type 2 preproprotein	17%	1%	11.50
DSG1_EC3	Desmoglein 1	17%	6%	2.88
DSG3_EC1	Desmoglein 3	17%	5%	3.29
CD75, ST6GAL1	ST6 beta-galactosamide alpha-2,6-sialyltranferase 1	16%	5%	3.21
CDH17	Cadherin 17 precursor	16%	3%	5.62
NDUFB4	NADH-ubiquinone oxidoreductase B15 subunit	16%	2%	7.49
NR3C1	Nuclear receptor subfamily 3, group C, member 1	16%	5%	3.21
PMPCA	Peptidase (mitochondrial processing) alpha	16%	4%	3.75
SLC38A1	Solute carrier family 38, member 1	16%	4%	3.75
TIMM13	Mitochondrial import inner membrane translocase subunit TIM13 B	16%	4%	4.50
ATP2A2-V1	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	16%	6%	2.74
CACNA2D1	CalciumChannel, voltagedependent, alpha	16%	3%	5.49
CD3G	CD3g molecule,Gamma (CD3-TCR complex)	16%	2%	7.32
FGFR1	FibroblastGrowth factor receptor 1	16%	4%	3.66
GLUD2	Glutamate dehydrogenase 2	16%	6%	2.74
CD74	CD74 molecule, major histocompatibility complex, class II invariant chain	16%	6%	2.68
COL6A2	Collagen, type VI, alpha 2	16%	2%	7.14
GPAM	Glycerol-3-phosphate acyltransferase	16%	6%	2.68
HADH	Short chain 3-hydroxyacyl-CoA dehydrogenase	16%	3%	5.36
HMGCL	Hydroxymethylglutaryl-CoA lyase	16%	5%	3.06
PDGFRA	Platelet-derivedGrowth factor receptor alpha	16%	5%	3.06
AR	Androgen receptor	15%	4%	4.18
CD98, SLC7A5	Solute carrier family 7 (cationic amino acid transporter, y+ system), member 5	15%	5%	2.99
COL21A1	Collagen, type XXI, alpha 1	15%	2%	6.97
GRIA3	Glutamate receptor, ionotrophic, AMPA3	15%	4%	3.48
CD98, SLC3A2	Solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2	15%	6%	2.55
COL9A1	Collagen, type IX, alpha 2	15%	4%	3.40
COX10	Protoheme IX farnesyltransferase	15%	2%	6.80
CTNNA1	Catenin, alpha 1	15%	5%	2.91
HBE1	Hemoglobin, epsilon 1	15%	4%	3.40
PCDHB9	Protocadherin beta 9 precursor	15%	5%	2.91
TMLHE	Trimethyllysine dioxygenase	15%	3%	5.10
CD11C, ITGAX	Integrin, alpha X (complement component 3 receptor 4 subunit)	14%	1%	9.93
CD20, MS4A1	Membrane-spanning 4-domains, subfamily A, member 1	14%	7%	2.21
DSG1-EC2	Desmoglein 1	14%	5%	2.84
FECH	Ferrochelatase	14%	3%	4.97
HK2	Hexokinase, type II	14%	7%	2.21
MTX1	Metaxin 1	14%	2%	6.62
CD14	CD14 molecule	14%	6%	2.42
CD4	CD4 molecule	14%	6%	2.42
CD66e,CEACAM5	Carcinoembryonic antigen-related cell adhesion molecule 5	14%	5%	2.76
DSC2	Desmocollin 2 isoform Dsc2a preproprotein	14%	6%	2.42
FCRLB	Fc receptor-like B	14%	4%	3.22

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

MUPCDH	Mucin and cadherin-like isoform 1	14%	6%	2.42
NDUFA2	NADH-ubiquinone oxidoreductase B8 subunit	14%	3%	4.84
SDHA	Succinate dehydrogenase (ubiquinone) flavoprotein subunit	14%	6%	2.42
SLC7A8	solute carrier family 7 (cationic amino acid	14%	4%	3.87
CKMT1B	Creatine kinase	14%	3%	4.70
COX17	Cytochrome c oxidase copper chaperone	14%	3%	4.70
NDUFA12	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 12;	14%	7%	2.09
OGFRL1	OpioidGrowth factor receptor-like 1	14%	4%	3.76
ANXA9	AnnexinA9	13%	4%	3.05
CHRM1	Cholinergic receptor, muscarinic 1	13%	3%	4.57
COL9A1	Collagen, type IX, alpha 1	13%	6%	2.29
CPT1A	Carnitine O-palmitoyltransferase I, mitochondrial liver isoform	13%	4%	3.05
HLA-A	Major histocompatibility complex, class I, A	13%	6%	2.29
HLA-DPB1	Major histocompatibility complex, class II, DP beta 1	13%	7%	2.03
ATP2A2-V1	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	13%	6%	2.22
BDKRB1	Bradykinin receptor B1	13%	7%	1.97
CD3D	CD3d molecule, delta (CD3-TCR complex)	13%	5%	2.54
CD42a, GP9, GPIX	Glycoprotein IX (platelet)	13%	4%	3.55
DSG3_S2	Desmoglein 3	13%	4%	2.96
TIMM9	Mitochondrial import inner membrane translocase subunit TIM9 A	13%	7%	1.97
CACNB4	CalciumChannel, voltagedependent, beta 4	13%	4%	2.88
CHRNA2	Cholinergic receptor, nicotinic, alpha 2	13%	5%	2.46
CHRNA7	Cholinergic receptor, nicotinic, alpha 7	13%	3%	4.31
COX5B	Cytochrome c oxidase polypeptide Vb	13%	4%	2.88
DSG2	Desmoglein 2	13%	5%	2.46
PDK1	Pyruvate dehydrogenase [lipoamide]] kinase isozyme 1	13%	4%	3.45
PIGR	Polymeric immunoglobulin receptor	13%	3%	4.31
SDHD	Succinate dehydrogenase (ubiquinone) cytochrome B small subunit	13%	2%	5.75
SLC36A4	Solute carrier family 36, member 4	13%	1%	17.25
ATP2A2-V2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	12%	4%	2.79
CD99	CD99 molecule	12%	4%	3.35
NDUFA4	NADH-ubiquinone oxidoreductase MLRQ subunit	12%	3%	4.18
ABCB7	ATP-binding cassette transporter 7	12%	5%	2.31
CD10, MME	Membrane metallo-endopeptidase	12%	3%	4.05
CD11A, ITGAL-2	Integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide)	12%	1%	8.10
CD71, TFRC	Transferrin receptor (p90, CD71)	12%	3%	4.05
CD8B	CD8b molecule	12%	7%	1.80
CD96	CD96 molecule	12%	6%	2.03
COL20A1	Collagen, type XX, alpha 1	12%	4%	3.24
FCRL5	Fc receptor-like 5	12%	5%	2.31
HLA-DRB1	Major histocompatibility complex, class II, DR beta 1	12%	5%	2.31
ITGA5	IntegrIn alpha 5 precursor	12%	4%	2.70
MAOA	Amine oxidase (flavin-containing) A	12%	4%	2.70
NDUFS1	NADH-ubiquinone oxidoreductase 75 kDa subunit	12%	1%	16.20
PCDH8	Protocadherin 8 isoform 1 precursor	12%	4%	3.24
PCDHB10	Protocadherin beta 10 precursor	12%	6%	2.03
SUOX	Sulfite oxidase	12%	5%	2.31
CD13, ANPEP	Alanyl (membrane) aminopeptidase	11%	4%	3.14
MCCC2	Methylcrotonyl-CoA carboxylase beta chain	11%	4%	3.14
ATP2A2-V2	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2	11%	5%	2.17
CD207	CD207 molecule, langerin	11%	7%	1.68
COL3A1	Collagen, type III, alpha 1	11%	4%	2.53
NDUFB2	NADH-ubiquinone oxidoreductase AGGG subunit	11%	5%	2.17
SLC16A10	Solute carrier family 16, member 10	11%	1%	7.58

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CD1D	CD1d molecule	11%	4%	2.93
CD2	CD2 molecule	11%	6%	1.83
COX11	Cytochrome c oxidase assembly homolog	11%	4%	2.93
DHODH	Dihydroorotate dehydrogenase	11%	4%	2.93
GK-V1	Glycerol kinase, testis specific 1	11%	4%	2.93
CACNG7	Voltagedependent calcium channelGamma7	10%	3%	3.53
CD36	CD36 molecule (thrombospondin receptor)	10%	4%	2.35
CDH13	Cadherin 13 preproprotein	10%	3%	3.53
CDS2	Phosphatidate cytidylyltransferase 2	10%	4%	2.82
DSG3_EC2	Desmoglein 3	10%	7%	1.57
EPS8L1-V1	EPS8-like 1, isoform a	10%	4%	2.35
GOT1	Glutamic-oxaloacetic transaminase 1	10%	6%	1.76
HLA-B	Major histocompatibility complex, class I, B	10%	4%	2.35
ITGB2	Integrin, beta 2 precursor	10%	7%	1.57
UCP2	Mitochondrial uncoupling protein 2 (UCP 2) (UCPH)	10%	5%	2.02
APLNR	Apelin receptor	10%	4%	2.72
CD50, ICAM3	Intercellular adhesion molecule 3	10%	4%	2.72
GOT2	Glutamic-oxaloacetic transaminase 2	10%	6%	1.70
SLC25A5	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 5	10%	4%	2.27
CD18, ITGB2	integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)	9%	6%	1.63
CD1B	CD1b molecule	9%	1%	13.07
COL1A2	Collagen, type I, alpha 2	9%	5%	1.87
DSG3_S1	Desmoglein 3	9%	4%	2.18
DSG3	Desmoglein 3	9%	6%	1.63
DSG4	Desmoglein 4 isoform 2	9%	5%	1.87
F2RL1	Coagulation factor II (thrombin) receptorlike 1	9%	4%	2.18
GRIN2A	Glutamate receptor, ionotropic, N-methyl D-aspartate 2A	9%	4%	2.18
ITGB6	Integrin, beta 6	9%	3%	3.27
MTRR-V1	Methionine synthase reductase	9%	4%	2.18
NDUFV1	NADH-ubiquinone oxidoreductase 51 kDa subunit	9%	1%	6.53
UPK3B	Uroplakin 3B isoform a	9%	7%	1.45
CD92, SLC44A1	Solute carrier family 44, member 1	9%	2%	4.18
CRHR1	Corticotropin releasing hormone receptor 1	9%	3%	3.14
FACL6	Acyl-CoA synthetase long-chain family member 6	9%	2%	4.18
CACNA1G-S2	VoltagedependentCalciumChannel alpha 1G	9%	4%	2.40
CD69	CD69 molecule	9%	1%	6.01
CTNNA2	Catenin, alpha 2	9%	4%	2.00
FGFRL1	FibroblastGrowth factor receptor-like 1	9%	4%	2.00
MTRR-V2	Methionine synthase reductase	9%	5%	1.72
PKP4	Plakophilin 4 isoform a	9%	4%	2.00
C1QBP	Complement component 1, q subcomponent binding protein	8%	4%	2.30
CD5	CD5 molecule	8%	2%	3.83
CD57, B3GAT1	Beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P)	8%	4%	2.30
DSG1	Desmoglein 1	8%	2%	3.83
ORAI1	Calcium release	8%	3%	2.88
PMPCB	Mitochondrial processing peptidase beta subunit	8%	4%	1.92
SLC25A17	Solute carrier family 25 (mitochondrial carrier; peroxisomal membrane protein, 34kDa), member 17	8%	1%	5.75
CD41, ITGA2B-2	Integrin, alpha 2b (plateletGlycoprotein IIb of IIb/IIIa complex, antigen CD41)	8%	4%	1.83
CD66b, CEACAM8	Carcinoembryonic antigen-related cell adhesion molecule 8	8%	5%	1.57
CHRND	Cholinergic receptor, nicotinic, delta	8%	3%	2.74
COQ3	Hexaprenyldihydroxybenzoate methyltransferase	8%	3%	2.74
ECHS1	Enoyl-CoA hydratase	8%	4%	2.20
HRH2	Histamine receptor H2	8%	4%	2.20
HTRA2	HtrA serine peptidase 2	8%	4%	1.83

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

NDUFS6	NADH-ubiquinone oxidoreductase 13 kDa-A subunit	8%	4%	2.20
UCRC	Ubiquinol-cytochrome c reductase, complex III subunit X	8%	5%	1.57
CACNA1G-S3	VoltagedependentCalciumChannel alpha 1G	8%	6%	1.31
CDH11	Cadherin 11, type 2 preproprotein	8%	4%	1.74
NDUFA7	NADH-ubiquinone oxidoreductase subunit B14.5a	8%	4%	2.09
NGFRAP1	NerveGrowth factor receptor (TNFRSF16)	8%	4%	2.09
UQCRQ	Ubiquinol-cytochrome c reductase, complex III subunit VII	8%	5%	1.49
CD52	CD52 molecule	7%	1%	4.97
CYCS	Cytochrome c	7%	4%	1.66
DSC3	Desmocollin 3 isoform Dsc3a preproprotein	7%	9%	0.83
EPS8L3	EpidermalGrowth factor receptor pathway substrate 8-related protein 3	7%	4%	1.99
MIPEP	Mitochondrial intermediate peptidase	7%	1%	9.93
NDUFV2	NADH-ubiquinone oxidoreductase 24 kDa subunit	7%	4%	1.99
SLC9A6	Sodium/hydrogen exchanger 6 (Na(+)/H(+) exchanger 6) (NHE-6)	7%	4%	1.99
BAD	Bcl2-antagonist of cell death (BAD)	7%	4%	1.88
CACNA1S-S3	CalciumChannel, voltagedependent, L type,	7%	4%	1.88
DSG2	Desmoglein 2	7%	7%	1.05
DSG3_EC5	Desmoglein 3	7%	4%	1.57
IGF1R	Insulin-likeGrowth factor 1 receptor precursor	7%	1%	4.70
PPIF	Peptidyl-prolyl cis-trans isomerase	7%	8%	0.86
ACTG2	Actin,GAmmA 2, smooth muscle, enteric	6%	4%	1.48
CHRNA2	Cholinergic receptor, nicotinic, alpha 2	6%	4%	1.78
DSG1	Desmoglein 1	6%	5%	1.27
FLT3LG	Fms-related tyrosine kinase 3 ligand	6%	4%	1.48
MTX2-V1	Metaxin 2	6%	4%	1.48
NDUFV3-V1	NADH-ubiquinone oxidoreductase 9 kDa subunit	6%	5%	1.27
AGTR1	Angiotensin II receptor, type 1	6%	4%	1.39
CD29, ITGB2	Integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)	6%	2%	2.79
CD3G	CD3g molecule,Gamma (CD3-TCR complex)	6%	4%	1.39
CHRNA10	Cholinergic receptor, nicotinic, alpha 10	6%	3%	2.09
FCGRT	FcFragment of IgG, receptor, transporter,	6%	5%	1.19
FPGS	Folylpolyglutamate synthase	6%	2%	2.79
NDUFA1	NADH-ubiquinone oxidoreductase MWFE subunit	6%	3%	2.09
PTH1R	Parathyroid hormone 1 receptor	6%	3%	2.09
SCP3	Synaptonemal complex protein 3	6%	4%	1.39
CD47	CD47 molecule	6%	5%	1.12
CD8A	CD8a molecule	6%	6%	0.98
CD97	CD97 molecule	6%	7%	0.87
CKMT2	Creatine kinase	6%	2%	2.61
TIMM22	Mitochondrial import inner membrane translocase subunit TIM22	6%	1%	3.92
UQCRFS1	Ubiquinol-cytochrome C reductase iron-sulfur subunit	6%	4%	1.31
CD27	CD27 molecule	5%	5%	1.05
CD58	CD58 molecule	5%	4%	1.46
CD9	CD9 molecule	5%	4%	1.46
DSC3	Desmocollin 3 isoform Dsc3a preproprotein	5%	6%	0.91
GCDH-V1	Glutaryl-CoA dehydrogenase	5%	4%	1.22
HSPD1	Heat shock 60kDa protein 1	5%	4%	1.46
ITGB1BP2	Integrin beta 1 binding protein 2	5%	4%	1.46
TSPO	translocator protein	5%	2%	2.44
UQCRC2	Ubiquinol-cytochrome C reductase complex core protein 2	5%	5%	1.05
ANXA4	Annexin IV	5%	6%	0.85
CD1A	CD1a molecule	5%	7%	0.76
CD28	CD28 molecule	5%	6%	0.85
CD55	CD55 molecule, decay accelerating factor for complement (Cromer bloodGroup)	5%	4%	1.13

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

CD66d,CEACAM3	Carcinoembryonic antigen-related cell adhesion molecule 3	5%	4%	1.13
CDH16	Cadherin 16 precursor	5%	2%	2.27
CDH24	Cadherin	5%	4%	1.36
CHRM2	Cholinergic receptor, muscarinic 2	5%	6%	0.85
COL5A1	Collagen, type V, alpha 1	5%	4%	1.36
COLQ	Collagen-like tail subunit	5%	4%	1.13
FCRL4	Fc receptor-like 4	5%	4%	1.36
NDUFA13	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 13	5%	5%	0.97
NDUFV1-V1	NADH-ubiquinone oxidoreductase 51 kDa subunit	5%	1%	3.40
SLC25A15	Solute carrier family 25 (aspartate/glutamate carrier), member 15	5%	3%	1.70
SLC25A19	Solute carrier family 25, member 19	5%	4%	1.13
SLC25A39	Solute carrier family 25, member 39	5%	6%	0.85
SLC36A2	Solute carrier family 36, member 2	5%	2%	2.27
TACR1	Tachykinin receptor 1	5%	4%	1.13
WARS2	Tryptophanyl-tRNA synthetase	5%	1%	6.80
CD19	CD19 molecule	5%	1%	6.27
CD66f, PSG1	Pregnancy specific beta-1-glycoprotein 1	5%	2%	2.09
HLA-DQA1	Major histocompatibility complex, class II, DQ alpha 1	5%	7%	0.63
ITGB1BP1	Integrin cytoplasmic domain-associated protein 1	5%	3%	1.57
OXA1L	Cytochrome oxidase biogenesis protein OXA1	5%	5%	0.90
PCCA	Propionyl-CoA carboxylase alpha chain	5%	7%	0.70
PCDH20	Protocadherin 20	5%	4%	1.25
SLC25A20	Solute carrier family 25 (mitochondrial carrier; ornithine transporter) member 20	5%	1%	6.27
AKAP1	Protein kinase A Anchoring protein 1	4%	4%	1.15
ANXA8L2	AnnexinA8L2	4%	4%	0.96
BCL2	Apoptosis regulator Bcl-2	4%	1%	2.88
CD40	CD40 molecule, TNF receptor superfamily member 5	4%	5%	0.82
CD79	CD79b molecule, immunoglobulin-associated beta	4%	5%	0.82
CD83	CD83 molecule	4%	6%	0.72
CD89, FCAR	Fc fragment of IgA, receptor for	4%	4%	0.96
CD90, THY1	Thy-1 cell surface antigen	4%	4%	0.96
CD94, KLRD1	Killer cell lectin-like receptor subfamily D, member 1	4%	4%	1.15
CHRNA10	Cholinergic receptor, nicotinic, alpha 10	4%	4%	1.15
COX6A1	Cytochrome c oxidase polypeptide VIa-liver	4%	7%	0.58
CS	Citrate synthase	4%	1%	2.88
FLT4	Fms-related tyrosine kinase 4	4%	6%	0.72
ITGAV	Integrin alpha-V isoform 1 precursor	4%	6%	0.72
NDUFB1	NADH-ubiquinone oxidoreductase MNLL subunit	4%	5%	0.82
PCCB	Propionyl-CoA carboxylase beta chain	4%	4%	0.96
SCP2	Sterol carrier protein 2	4%	6%	0.72
TOMM40	Probable mitochondrial import receptor subunit TOM40 homolog	4%	2%	1.92
ACTC1	Actin, AlphA, cArdiAc muscle 1	4%	4%	1.05
CD24	CD24 molecule	4%	4%	0.87
CD73, NT5E	5'-nucleotidase, ecto (CD73)	4%	4%	0.87
CD86	CD86 molecule	4%	5%	0.75
CDH7	Cadherin 7, type 2 preproprotein	4%	4%	1.05
CHRNA10	Cholinergic receptor, nicotinic, alpha 10	4%	2%	1.74
CHRNA9	Cholinergic receptor, nicotinic, alpha 9	4%	7%	0.58
HLA-F	Major histocompatibility complex, class I, F	4%	7%	0.52
IGF2R	Insulin-likeGrowth factor 1 receptor precursor	4%	4%	0.87
IGFBP2	Insulin-likeGrowth factor 2 mRNA binding protein 2	4%	3%	1.31
MDH2	Malate dehydrogenase	4%	5%	0.75
NDUFB5	NADH-ubiquinone oxidoreductase SGDH subunit	4%	3%	1.31
NDUFS4	NADH-ubiquinone oxidoreductase 18 kDa subunit	4%	6%	0.65

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

SLC25A14	Solute carrier family 25 (aspartate/glutamate carrier), member 14	4%	4%	0.87
UPK2	Uroplakin 2	4%	3%	1.31
UQCRB-V1	Ubiquinol-cytochrome C reductase complex 14 kDa protein, isoform 1	4%	4%	0.87
VDAC2	Voltage-dependent anion-selective channel protein 2	4%	2%	1.74
AK2	Adenylate kinase isoenzyme 2	3%	3%	1.18
ANXA1	Annexin I	3%	7%	0.52
ATP5O	ATP synthase oligomycin sensitivity conferral protein	3%	6%	0.59
BCKDK-V2	Branched chain ketoacid dehydrogenase kinase , isoform b	3%	1%	4.70
CD5	CD5 molecule	3%	5%	0.67
CDH20	Cadherin 20, type 2 preproprotein	3%	5%	0.67
CHRNA6	Cholinergic receptor, nicotinic, alpha 6	3%	7%	0.52
DSC1	Desmocollin 1 isoform Dsc1a preproprotein	3%	5%	0.67
DSG1_EC4	Desmoglein 1	3%	5%	0.67
FCRL2	Fc receptor-like 2	3%	1%	4.70
GPX4	PhospholipidhydroperoxideGlutathione peroxidase	3%	6%	0.59
HLA-C-V1	Major histocompatibility complex, class I, C	3%	6%	0.59
HSPE1	Heat shock 10kDa protein 1	3%	7%	0.52
IGF2	Insulin-likeGrowth factor 2	3%	2%	1.57
LARS2	Probable leucyl-tRNA synthetase	3%	4%	0.78
MTX2-V2	Metaxin 2	3%	3%	1.18
PCDHB1	Protocadherin beta 1 precursor	3%	7%	0.52
TOMM70A	Mitochondrial precursor proteins import receptor (Translocase of outermembrane TOM70)	3%	6%	0.59
CACNA1G-S2	VoltagedependentCalciumChannel alpha 1G	3%	4%	0.84
CD68	CD68 molecule	3%	7%	0.46
CHRNB3	Cholinergic receptor, nicotinic, beta	3%	4%	0.84
COX4I1	Cytochrome c oxidase subunit IV isoform 1	3%	7%	0.46
CTNNA3-V1	Catenin, alpha 3	3%	4%	0.84
DLAT	Dihydrolipoamide acetyltransferase component of pyruvate dehydrogenasecomplex	3%	1%	4.18
DSG1	Desmoglein 1	3%	1%	2.09
HLA-DQB1	Major histocompatibility complex, class II, DQ beta 1	3%	4%	0.84
HLCS	Biotin-protein ligase	3%	6%	0.52
MCCC1	Methylcrotonyl-CoA carboxylase alpha chain	3%	5%	0.60
SLC25A12	Solute carrier family 25 (aspartate/glutamate carrier), member 12	3%	5%	0.60
TOMM20	Mitochondrial import receptor subunit TOM20 homolog	3%	7%	0.46
ANXA6	Annexin VI isoform 1	3%	4%	0.61
CACNA1S-S2	CalciumChannel, voltagedependent, L type,	3%	1%	3.66
CD43, SPN	Sialophorin	3%	4%	0.61
CD80	CD80 molecule	3%	4%	0.61
CD85, LILRB1	Leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 1	3%	2%	1.22
CHRNB4-V2	Cholinergic receptor, nicotinic, beta 4	3%	2%	1.22
COL4A3BP	Collagen, type IV, alpha 3 (Goodpasture antigen) binding protein	3%	4%	0.73
COL9A3	Collagen, type IX, alpha 3	3%	3%	0.91
COX6A2	Cytochrome c oxidase polypeptide VIa-heart	3%	8%	0.33
DSG3_A53625-88	Desmoglein 3	3%	8%	0.33
DSG4	Desmoglein 4 isoform 2	3%	5%	0.52
GRB7	Growth factor receptor-bound protein 7	3%	7%	0.41
ITGAX	Integrin alpha X precursor	3%	5%	0.52
MYCBP	C-Myc binding protein	3%	5%	0.52
NDUFS3	NADH-ubiquinone oxidoreductase 30 kDa subunit	3%	3%	0.91
PCDHB11	Protocadherin beta 11 precursor	3%	2%	1.22
PCDHB13	Protocadherin beta 13 precursor	3%	4%	0.73
PDHX	pyruvate dehydrogenase complex,ccomponent X	3%	7%	0.37
PERP	PerP, TP53 apoptosis effector	3%	4%	0.61
PERP	PerP, TP53 apoptosis effector	3%	5%	0.52

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

SLC25A17	Solute carrier family 25 (mitochondrial carrier; peroxisomal membrane protein, 34kDa), member 17	3%	3%	0.91
TIMM17B	Mitochondrial import inner membrane translocase subunit TIM17 B (JM3)	3%	4%	0.61
TIMM8B	Mitochondrial import inner membrane translocase subunit TIM8 B	3%	5%	0.52
CACNG3	Voltagedependent calcium channelGamma3	2%	4%	0.52
CD1C	CD1c molecule	2%	3%	0.78
CD7	CD7 molecule	2%	6%	0.39
CD70	CD70 molecule	2%	6%	0.39
CD95, FAS	Fas (TNF receptor superfamily, member 6)	2%	4%	0.52
CDH2	Cadherin 2, type 1 preproprotein	2%	4%	0.52
CHRFAM7A	CHRNA7FAM7A fusion isoform 1	2%	4%	0.52
CHRM1	Cholinergic receptor, muscarinic 1	2%	3%	0.78
CHRM5	Cholinergic receptor, muscarinic 5	2%	5%	0.45
CHRNA3	Cholinergic receptor, nicotinic, alpha 3	2%	4%	0.63
CKMT2	Creatine kinase	2%	7%	0.35
CPT2	Carnitine O-palmitoyltransferase II, mitochondrial precursor	2%	7%	0.31
CTNNB1	Catenin (cadherin-associated protein), beta 1,	2%	5%	0.45
DIABLO	IAP-binding mitochondrial protein	2%	1%	1.57
DSG2	Desmoglein 2	2%	1%	3.14
DSG3	Desmoglein 3	2%	7%	0.35
GATM	Glycine amidinotransferase	2%	1%	3.14
GPT	Alanine aminotransferase	2%	4%	0.52
HRH1	Histamine receptor H1	2%	4%	0.63
ITGAL	Integrin alpha L isoform a precursor	2%	3%	0.78
NNT-V2	NAD(P) transhydrogenase	2%	4%	0.63
OXCT1	Succinyl-CoA:3-ketoacid-coenzyme A transferase	2%	4%	0.63
PCDH21	Protocadherin 21 precursor	2%	6%	0.39
PDGFRL	Platelet-derivedGrowth factor receptor	2%	4%	0.63
SLC25A1	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 1	2%	4%	0.63
SLC25A4	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 4	2%	4%	0.63
ACTB	Actin, betA	2%	4%	0.52
ACTG1	Actin,GAmmA 1	2%	3%	0.65
AGTRAP	Angiotensin II receptor, type 2	2%	3%	0.65
AK3	GTP:AMP phosphotransferase	2%	7%	0.29
ALAS1	Aminolevulinate, delta-, synthase 1	2%	4%	0.44
ATP2C1-V2	ATPase, Ca++ transporting, type 2C, membe	2%	6%	0.33
BCAT2	Branched-chain amino acid aminotransferase	2%	6%	0.33
BCKDHB	Branched chain keto acid dehydrogenase E1, beta polypeptide	2%	4%	0.44
C5orf39	Annexin II receptor	2%	3%	0.65
CACNB1	CalciumChannel, voltagedependent, beta 1	2%	1%	2.61
CACNG1	Voltagedependent calcium channelGamma1	2%	2%	0.87
CACNG4	Voltagedependent calcium channelGamma4	2%	4%	0.44
CD83	CD83 molecule	2%	5%	0.37
CD9	CD9 molecule	2%	4%	0.44
CDH19	Cadherin 19, type 2 preproprotein	2%	4%	0.52
CDH23	Cadherin	2%	4%	0.52
CHRNA1-V1	Cholinergic receptor, nicotinic, alpha 1isoform b	2%	4%	0.44
CHRNA4-V2	Cholinergic receptor, nicotinic, alpha 4 subunit	2%	5%	0.37
CHRNA6	Cholinergic receptor, nicotinic, alpha 6	2%	6%	0.33
COL10A1	Collagen, type X, alpha 1	2%	4%	0.44
COL19A1	Collagen, type XIX, alpha 1	2%	4%	0.44
COL4A6	Collagen, type IV, alpha 6	2%	6%	0.33
COX6C	Cytochrome c oxidase polypeptide VIc precursor	2%	5%	0.37
CTNND1-V1	Catenin, delta 1 isoform 1ABC	2%	3%	0.65
DBT	Lipoamide acyltransferase component of branched-chain alpha-keto aciddehydrogenase complex subunit)	2%	5%	0.37

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

DNAJA3	DnaJ (Hsp40) homolog, subfamily A, member 3	2%	7%	0.26
DSC2	Desmocollin 2 isoform Dsc2a preproprotein	2%	6%	0.33
DSG3_+A697S2	Desmoglein 3	2%	7%	0.26
DSG4	Desmoglein 4 isoform 2	2%	3%	0.65
F2RL2	Coagulation factor II (thrombin) receptorlike 2	2%	4%	0.44
FDX1	Adrenodoxin, mitochondrial precursor	2%	5%	0.37
GRB2	Growth factor receptor-bound protein 2 isoform	2%	4%	0.52
HCCS	Cytochrome c-type heme lyase	2%	5%	0.37
HLA-DRA	Major histocompatibility complex, class II, DR alpha	2%	4%	0.52
HRH4	Histamine H4 receptor isoform 1	2%	5%	0.37
ITGB8	Integrin, beta 8	2%	4%	0.44
NDUFA5	NADH-ubiquinone oxidoreductase 13 kDa-B subunit	2%	6%	0.33
NDUFS2	NADH-ubiquinone oxidoreductase 49 kDa subunit	2%	4%	0.44
NFS1	Nitrogen fixation 1 homolog	2%	1%	2.61
NFS2	Nitrogen fixation 2 homolog	2%	1%	2.61
PCDHB14	Protocadherin beta 14 precursor	2%	4%	0.44
PERP	PerP, TP53 apoptosis effector	2%	5%	0.37
PERP	PerP, TP53 apoptosis effector	2%	4%	0.44
PPOX	Protoporphyrinogen oxidase	2%	3%	0.65
SHMT1	Serine hydroxymethyltransferase, cytosolic	2%	4%	0.52
SLC25A10	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 10	2%	3%	0.65
SLC25A11	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 11	2%	1%	1.31
SLC25A31	Solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 31	2%	4%	0.52
SLC6A6-V3	solute carrier family 6 (neurotransmiter)	2%	5%	0.37
SURF1	Surfeit locus protein 1	2%	5%	0.37
TIMM23	Mitochondrial import inner membrane translocase subunit TIM23	2%	7%	0.29
TK2	Thymidine kinase 2, mitochondrial	2%	6%	0.33
TST	Thiosulfate sulfurtransferase (Rhodanese)	2%	6%	0.33
UCRC	Ubiquinol-cytochrome c reductase, complex III subunit X	2%	5%	0.37
ABCB6	ATP-binding cassette transporter 6	2%	6%	0.26
ABCD4	ATP-binding cassette, sub-family D (ALD), member 4	2%	6%	0.26
ACADS	Acyl-CoA dehydrogenase, short-chain specific	2%	4%	0.42
ACADSB	Acyl-CoA dehydrogenase, short/branched chain specific	2%	4%	0.35
ACSL3	Acyl-CoA synthetAse long-chAin fAmily member 3	2%	4%	0.35
ACTN2	Actinin, AlphA 2	2%	5%	0.30
AK3L1	Adenylate kinase 3	2%	2%	0.70
ATP2C1-V1	ATPase, Ca++ transporting, type 2C, membe	2%	4%	0.35
ATP5A1	ATP synthase alpha chain	2%	4%	0.42
CACNA1G-S1	VoltagedependentCalciumChannel alpha 1G	2%	6%	0.26
CD72	CD72 molecule	2%	5%	0.30
CDH12	Cadherin 12, type 2 preproprotein	2%	4%	0.42
CHRFAM7A	CHRNA7FAM7A fusion isoform 1	2%	4%	0.35
CKMT1A	Creatine kinase	2%	4%	0.35
COL20A1	Collagen, type XX, alpha 1	2%	5%	0.30
COL6A1	Collagen, type VI, alpha 1	2%	5%	0.30
DLD	Dihydrolipoamide dehydrogenase	2%	3%	0.52
DSG1_EC1	Desmoglein 1	2%	7%	0.23
DSG3_EC4	Desmoglein 3	2%	5%	0.30
DSG3-EC1	Desmoglein 3	2%	5%	0.30
GRIA2	Glutamate receptor, ionotropic, AMPA2	2%	3%	0.52
HADHA	Trifunctional enzyme alpha subunit	2%	5%	0.30
HK1-V4	Hexokinase, type I	2%	3%	0.52
ITGB1BP3	Integrin beta 1 binding protein 3	2%	4%	0.42
JUP-V1	Junction plakoglobin	2%	5%	0.30

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

MLYCD	Malonyl-CoA decarboxylase	2%	4%	0.35
NDUFA10	NADH-ubiquinone oxidoreductase 42 kDa subunit	2%	3%	0.52
PCDHB16	Protocadherin beta 16 precursor	2%	4%	0.35
PERP	PerP, TP53 apoptosis effector	2%	4%	0.42
PKP2	Plakophilin 2 isoform 2a	2%	7%	0.21
SLC25A18	Solute carrier family 25, member 18	2%	4%	0.42
SLC25A2	Solute carrier family 25 (mitochondrial carrier; ornithine transporter) member 2	2%	3%	0.52
SLC7A13	solute carrier family 7, (cationic amino acid	2%	6%	0.26
TOMM40	Probable mitochondrial import receptor subunit TOM40 homolog	2%	4%	0.35
UPK1B	Uroplakin 1B	2%	4%	0.35
VDAC3	Voltage-dependent anion-selective channel protein 3	2%	3%	0.52
YWHAE	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide	2%	4%	0.35
ACADM-V3	Acyl-CoA dehydrogenase, medium-chain specific	1%	1%	1.57
ANXA13	AnnexinA13 isoform b	1%	1%	0.78
ATP2C1-V3	ATPase, Ca++ transporting, type 2C, membe	1%	6%	0.20
ATP7B	Copper-transporting ATPase 2	1%	4%	0.31
CCKAR	Cholecystokinin A receptor	1%	1%	0.78
CD1A	CD1a molecule	1%	4%	0.26
CD38	CD38 molecule	1%	5%	0.22
CD66a, CEACAM1	Carcinoembryonic antigen-related cell adhesion molecule 1 (biliaryGlycoprotein)	1%	6%	0.20
CD70	CD70 molecule	1%	5%	0.22
CD82	CD82 molecule	1%	5%	0.22
CD84	CD84 molecule	1%	6%	0.20
CD8B	CD8b molecule	1%	5%	0.22
CHRNA3	Cholinergic receptor, nicotinic, alpha 3	1%	3%	0.39
CHRNA4-V1	Cholinergic receptor, nicotinic, alpha 4 subunit	1%	1%	0.78
CHRNA4-V2	Cholinergic receptor, nicotinic, alpha 4 subunit	1%	1%	0.78
CHRNA7	Cholinergic receptor, nicotinic, alpha 7	1%	3%	0.39
CHRNG	Cholinergic receptor, nicotinic,Gamma	1%	1%	0.78
CKMT1A	Creatine kinase	1%	1%	0.78
CTNND2	Catenin (cadherin-associated protein), delta 1,	1%	7%	0.16
DSC3	Desmocollin 3 isoform Dsc3a preproprotein	1%	7%	0.17
DSG1_1-496	Desmoglein 1	1%	6%	0.20
DSG3	Desmoglein 3	1%	1%	1.57
DSG3_EC3	Desmoglein 3	1%	5%	0.22
DSG3	Desmoglein 3	1%	5%	0.22
DSG4	Desmoglein 4 isoform 2	1%	5%	0.22
DSG4	Desmoglein 4 isoform 2	1%	4%	0.31
EPS8	EpidermalGrowth factor receptor pathway substrate 8	1%	5%	0.22
ESR1	Estrogen receptor 1	1%	6%	0.20
FCRL3	Fc receptor-like 3 precursor	1%	6%	0.20
FECH	Ferrochelatase	1%	4%	0.31
FGFR2	FibroblastGrowth factor receptor 2	1%	5%	0.22
GRIA1	Glutamate receptor, ionotropic, AMPA1	1%	4%	0.31
GSR	Glutathione reductase	1%	5%	0.22
HLA-A_V2	Major histocompatibility complex, class I, A	1%	4%	0.26
IRF8	Interferon regulatory factor 8	1%	5%	0.22
ITGA2B	IntegrIn alpha 2b preproproteIn	1%	6%	0.20
ITGA9	Integrin, alpha 9 precursor	1%	6%	0.20
KIF1B	Kinesin-like protein KIF1B (Klp)	1%	4%	0.31
MGST1	MicrosomalGlutathione S-transferase 1	1%	7%	0.17
OAT	Ornithine aminotransferase	1%	7%	0.17
PCDH1	Protocadherin 1 isoform 2 precursor	1%	5%	0.22
PCDHB7	Protocadherin beta 7 precursor	1%	2%	0.52

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

PEMT	Phosphatidylethanolamine N-methyltransferase	1%	4%	0.31
SHMT2	Serine hydroxymethyltransferase 2	1%	4%	0.26
SLC38A2	Solute carrier family 38, member 2	1%	7%	0.16
TACR3	Tachykinin receptor 3	1%	1%	0.78
TGFBR1	TransformingGrowth factor, beta receptor I	1%	1%	0.78
TGFBR3	TransformingGrowth factor, beta receptor III	1%	6%	0.20
UCP3	Mitochondrial uncoupling protein 3 (UCP 3)	1%	7%	0.17
UPK1A	Uroplakin 1A	1%	1%	0.78
UPK3A	Uroplakin 3A precursor	1%	1%	0.78
ABCB8	ATP-binding cassette transporter 8	1%	5%	0.15
ACADL	Acyl-CoA dehydrogenase, long-chain specific	1%	3%	0.26
ACADVL-V2	Acyl-CoA dehydrogenase, very-long-chain specific	1%	4%	0.17
ACSL1	Acyl-CoA synthetAse long-chAin fAmily member 1	1%	5%	0.15
AIFM1	Angiotensin II receptorAssociated protein	1%	5%	0.15
ANXA11	AnnexinA11	1%	1%	0.52
ANXA2	AnnexinA2 isoform 1	1%	4%	0.17
ATP2C1-V1	ATPase, Ca++ transporting, type 2C, membe	1%	5%	0.15
BCKDHA	Branched chain keto acid dehydrogenase E1, alpha polypeptide	1%	7%	0.12
BDH1	D-beta-hydroxybutyrate dehydrogenase	1%	7%	0.12
CACNA1S-S1	CalciumChannel, voltagedependent, L type,	1%	3%	0.26
CACNA2D4	CalciumChannel, voltagedependent, alpha	1%	6%	0.13
CD77, A4GALT	Slpha 1,4-galactosyltransferase	1%	7%	0.12
CD8A	CD8a molecule	1%	4%	0.17
CDH15	Cadherin 15 preproprotein	1%	4%	0.17
CDH18	Cadherin 18, type 2 preproprotein	1%	3%	0.26
CHRM1	Cholinergic receptor, muscarinic 1	1%	4%	0.17
CHRM3	Cholinergic receptor, muscarinic 3	1%	1%	0.52
CHRNA1-V1	Cholinergic receptor, nicotinic, alpha 1 isoform b	1%	5%	0.15
CHRNA7	Cholinergic receptor, nicotinic, alpha 7	1%	4%	0.17
CHRNE	Cholinergic receptor, nicotinic, epsilon	1%	2%	0.35
COL14A1	Collagen, type XIV, alpha 1	1%	7%	0.10
COL18A1	Collagen, type XVIII, alpha 1	1%	7%	0.10
COL24A1	Collagen, type XXIV, alpha 1	1%	5%	0.15
COX4I2	Cytochrome c oxidase subunit IV isoform 2	1%	1%	0.52
COX7A2	Cytochrome c oxidase polypeptide VIIa-liver/heart	1%	7%	0.10
CYC1	Cytochrome c1, heme protein	1%	3%	0.26
DSG1	Desmoglein 1	1%	4%	0.17
DSG1_EC2	Desmoglein 1	1%	4%	0.17
DSG1_ECA	Desmoglein 1	1%	6%	0.13
DSG1-EC3	Desmoglein 1	1%	5%	0.15
DSG3_1-161	Desmoglein 3	1%	6%	0.13
DSG3-EC2	Desmoglein 3	1%	5%	0.15
ETFDH	Electron transfer flavoprotein-ubiquinone oxidoreductase	1%	4%	0.17
EVPL-S1	Envoplakin, segment 1	1%	1%	0.52
GLUD1	Glutamate dehydrogenase 1	1%	4%	0.21
GRIN2C	Glutamate receptor, ionotropic, N-methyl D-aspartate 2C	1%	4%	0.21
HLA-DPB1	Major histocompatibility complex, class II, DP alpha 1	1%	6%	0.13
LONP1	lon peptidase 1, mitochondria	1%	5%	0.15
MCCC2	Methylcrotonyl-CoA carboxylase beta chain	1%	6%	0.13
MUT	Methylmalonyl-CoA mutase	1%	4%	0.17
NDUFA3	NADH-ubiquinone oxidoreductase B9 subunit	1%	7%	0.10
NDUFB1	NADH-ubiquinone oxidoreductase MNLL subunit	1%	7%	0.12
NDUFC2	NADH-ubiquinone oxidoreductase subunit B14.5b	1%	4%	0.17
NDUFV3	NADH-ubiquinone oxidoreductase 9 kDa subunit	1%	6%	0.13

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

NLN	Neurolysin, mitochondrial precursor	1%	3%	0.26
NNT-V1	NAD(P) transhydrogenase	1%	4%	0.17
PCDH17	Protocadherin 17 precursor	1%	4%	0.21
PCDHB2	Protocadherin beta 2 precursor	1%	4%	0.21
PCDHB4	Protocadherin beta 4 precursor	1%	2%	0.35
PDGFRB	Platelet-derivedGrowth factor receptor beta	1%	3%	0.26
PDHA2	Pyruvate dehydrogenase E1 component alpha subunit, testis-specificform	1%	3%	0.26
PDK2	Pyruvate dehydrogenase [lipoamide]] kinase isozyme 2	1%	3%	0.26
PDK3	Pyruvate dehydrogenase [lipoamide]] kinase isozyme 3	1%	4%	0.17
PERP	PerP, TP53 apoptosis effector	1%	5%	0.15
PKP1	Plakophilin 1 isoform 1b	1%	1%	1.05
SDHB	Succinate dehydrogenase (ubiquinone) iron-sulfur protein	1%	4%	0.17
SDHC	Succinate dehydrogenase cytochrome b560 subunit	1%	5%	0.15
SLC25A13	Solute carrier family 25 (aspartate/glutamate carrier), member 13	1%	4%	0.21
SLC25A27	Solute carrier family 25, member 27	1%	4%	0.17
SLC7A10	solute carrier family 7, member 10	1%	4%	0.17
TK1	Thymidine kinase	1%	6%	0.13
ACADVL-V1	Acyl-CoA dehydrogenase, very-long-chain specific	0%	4%	0.10
ACSL4	Acyl-CoA synthetAse long-chAin fAmily member 4	0%	5%	0.07
ALDH2	Aldehyde dehydrogenase	0%	2%	0.17
ANXA10	AnnexinA10	0%	5%	0.07
ANXA7	Annexin VII isoform 2	0%	1%	0.26
ATP2C1-V4	ATPase, Ca++ transporting, type 2C, membe	0%	7%	0.06
CACNA1G	VoltagedependentCalciumChannel alpha 1G	0%	4%	0.10
CACNB4	CalciumChannel, voltagedependent, beta 4	0%	4%	0.09
CACNG5	Voltagedependent calcium channelGamma5	0%	5%	0.07
CD28	CD28 molecule	0%	4%	0.09
CD62P, SELP	Selectin P (granule membrane protein 140kDa, antigen CD62)	0%	6%	0.07
CDH6	Cadherin 6, type 2 preproprotein	0%	4%	0.10
CHRM2	Cholinergic receptor, muscarinic 2	0%	5%	0.07
CHRM5	Cholinergic receptor, muscarinic 5	0%	3%	0.13
CHRNA2	Cholinergic receptor, nicotinic, alpha 2	0%	4%	0.10
CHRNB2	Cholinergic receptor, nicotinic, beta 2	0%	6%	0.07
CHRNE	Cholinergic receptor, nicotinic, epsilon	0%	7%	0.06
COX5A	Cytochrome c oxidase polypeptide Va	0%	6%	0.07
COX7A1	Cytochrome c oxidase polypeptide VIIa-heart	0%	4%	0.09
DSC2	Desmocollin 2 isoform Dsc2a preproprotein	0%	4%	0.09
DSG1-EC4	Desmoglein 1	0%	7%	0.06
DSG3	Desmoglein 3	0%	5%	0.07
DSG3_S1	Desmoglein 3	0%	7%	0.05
EGFR	EpidermalGrowth factor receptor	0%	4%	0.10
EPS8L1-V2	EPS8-like 1, isoform b	0%	3%	0.13
ETFB-V1	Electron transfer flavoprotein beta-subunit (Beta-ETF), isoform 2	0%	4%	0.10
EVPL-S3	Envoplakin, segment 2	0%	1%	0.26
F2R	Coagulation factor II (thrombin) receptor	0%	4%	0.10
F2RL3	Coagulation factor II (thrombin) receptorlike 3	0%	5%	0.07
GRB14	Growth factor receptor-bound protein 14	0%	6%	0.07
GRIN2D	Glutamate receptor, ionotropic, N-methyl D-aspartate 2D	0%	5%	0.07
GSTK1-V1	Glutathione S-transferase kappa 1,isoform b	0%	6%	0.07
GSTK1-V2	Glutathione S-transferase kappa 1,isoform a	0%	7%	0.06
HADHB	Trifunctional enzyme beta subunit	0%	7%	0.06
ITGA3	IntegrIn alpha 3 isoform a precursor	0%	5%	0.07
ITGB3	Integrin beta chain, beta 3 precursor	0%	6%	0.07
ITGB3BP-V2	Integrin beta 3 binding protein, isoform 2	0%	4%	0.09

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

ITGBL1	Integrin, beta-like 1	0%	4%	0.09
NDUFA12	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 12;	0%	6%	0.07
NDUFA6	NADH-ubiquinone oxidoreductase B14 subunit	0%	5%	0.07
NDUFB3	NADH-ubiquinone oxidoreductase B12 subunit	0%	6%	0.07
NDUFB7	NADH-ubiquinone oxidoreductase B18 subunit	0%	7%	0.06
NDUFB8	NADH-ubiquinone oxidoreductase ASHI subunit	0%	7%	0.05
NDUFB9	NADH-ubiquinone oxidoreductase B22 subunit	0%	7%	0.05
NDUFS5	NADH-ubiquinone oxidoreductase 15 kDa subunit	0%	9%	0.04
NME4	Nucleoside diphosphate kinase	0%	5%	0.07
NR3C2	Nuclear receptor subfamily 3, group C, member 2	0%	4%	0.09
PCDHB3	Protocadherin beta 3 precursor	0%	4%	0.10
PCDHB8	Protocadherin beta 8 precursor	0%	4%	0.09
PRDX6	Peroxiredoxin 6	0%	7%	0.06
SLC25A3	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 3	0%	2%	0.17
SLC25A32	Solute carrier family 25, member 32	0%	3%	0.13
SLC38A7	Solute carrier family 38, member 7	0%	6%	0.07
UCP1	Mitochondrial brown fat uncoupling protein 1 (UCP 1) (Thermogenin)	0%	4%	0.09
UQCRC1	Ubiquinol-cytochrome C reductase complex core protein I	0%	7%	0.05
UQCRH	Ubiquinol-cytochrome C reductase complex 11 kDa protein	0%	5%	0.07
VDAC1	Voltage-dependent anion-selective channel protein 1	0%	6%	0.07
ABCB9-V4	ATP-binding cassette, sub-family B (MDR/TAP), member 9	0%	6%	0.00
ACSL5	Acyl-CoA synthetAse long-chAin fAmily member 5	0%	1%	0.00
ALAS2	Aminolevulinate, delta-, synthase 2	0%	6%	0.00
ALDH1B1	Aldehyde dehydrogenase X	0%	6%	0.00
ATP5A1	ATP synthase alpha chain	0%	4%	0.00
BCAT2	Branched-chain amino acid aminotransferase	0%	4%	0.00
BCKDK-V1	Branched chain ketoacid dehydrogenase kinase , isoform a	0%	1%	0.00
CACNA1S	CalciumChannel, voltagedependent, L type,	0%	3%	0.00
CD31, PECAM1	Platelet/endothelial cell adhesion molecule	0%	6%	0.00
CD54 ICAM1	Intercellular adhesion molecule 1	0%	7%	0.00
CD6	CD6 molecule	0%	7%	0.00
CD62L, SELL	Selectin L	0%	7%	0.00
CD87, PLAUR	Plasminogen activator, urokinase receptor	0%	3%	0.00
CHRNA1-V1	Cholinergic receptor, nicotinic, alpha 1 isoform b	0%	1%	0.00
CHRNA2	Cholinergic receptor, nicotinic, alpha 2	0%	7%	0.00
CHRNA9	Cholinergic receptor, nicotinic, alpha 9	0%	6%	0.00
CHRNE	Cholinergic receptor, nicotinic, epsilon	0%	6%	0.00
CHRNG	Cholinergic receptor, nicotinic,Gamma	0%	6%	0.00
CRHR2	Corticotropin releasing hormone receptor 2	0%	1%	0.00
CTNND1-V2	Catenin, delta 1 isoform 1ABC	0%	2%	0.00
DCI	Enoyl-CoA delta isomerase 1	0%	1%	0.00
DSC1	Desmocollin 1 isoform Dsc1a preproprotein	0%	6%	0.00
DSG1	Desmoglein 1	0%	4%	0.00
DSG2	Desmoglein 2	0%	4%	0.00
DSG4	Desmoglein 4 isoform 2	0%	5%	0.00
ESR2	Estrogen receptor 2	0%	6%	0.00
EVPL	Envoplakin	0%	1%	0.00
FCRL1	Fc receptor-like 1	0%	4%	0.00
FRS3	FibroblastGrowth factor receptor substrate 3-	0%	4%	0.00
FXC1	Mitochondrial import inner membrane translocase subunit TIM9 B	0%	5%	0.00
GLUD2	Glutamate dehydrogenase 2	0%	5%	0.00
GRIN2B	Glutamate receptor, ionotropic, N-methyl D-aspartate 2B	0%	5%	0.00
GRINA	Glutamate receptor, ionotropic, N-methyl D-aspartate-associated protein 1 (glutamate binding)	0%	5%	0.00
IGF1	Insulin-like growth factor 1	0%	7%	0.00

Suplemental Table 1. Reactivities of patient and control sera on protein micoarrays*

ITGAM	Integrin alpha M precursor	0%	7%	0.00
ITGB7	Integrin, beta 7	0%	5%	0.00
NDUFA13	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 13	0%	4%	0.00
NDUFB6	NADH-ubiquinone oxidoreductase B17 subunit	0%	7%	0.00
NDUFC1	NADH-ubiquinone oxidoreductase KFYI subunit	0%	5%	0.00
OGDH	Oxoglutarate (alpha-ketoglutarate) dehydrogenase (lipoamide)	0%	2%	0.00
OTC	Ornithine carbamoyltransferase	0%	5%	0.00
PCDH18	Protocadherin 18 precursor	0%	2%	0.00
PCDHGC5	ProtocadherinGamma subfamily C, 5 isoform 1	0%	5%	0.00
PCK1	Phosphoenolpyruvate carboxykinase, cytosolic [GTP]	0%	5%	0.00
PDP2	Pyruvate dehydrogenase [Lipoamide]]-phosphatase 2	0%	4%	0.00
PMPCA	Mitochondrial processing peptidase alpha subunit	0%	2%	0.00
PRDX5	Peroxiredoxin 5	0%	5%	0.00
RNASEL	Ribonuclease L (2',5'-oligoisoadenylate synthetase-dependent)	0%	4%	0.00
RTN4	Reticulon 4 (Neurite outgrowth inhibitor)	0%	7%	0.00
SLC25A21	Solute carrier family 25 (mitochondrial carrier; ornithine transporter) member 21	0%	7%	0.00
SLC25A6	solute carrier family 25 (mitochondrial carrier; citrate transporter), member 6	0%	8%	0.00
TGFBR2-V1	TransformingGrowth factor, beta receptor II	0%	6%	0.00
TIMM10	Mitochondrial import inner membrane translocase subunit TIM10	0%	6%	0.00
TIMM17A	Mitochondrial import inner membrane translocase subunit TIM17 A	0%	7%	0.00
UQCRB-V2	Ubiquinol-cytochrome C reductase complex 14 kDa protein, isoform 2	0%	6%	0.00

*** The letter V with a number after the gene symbol indicates the protein trascriptional variant.**