

Supplementary Table 1. Differentially expressed proteins (DEPs) with the normalized spectral abundance factor (NSAF) ratio.

Group1: Healthy fertile Donors.

Group2 :Fertile Donors with high oxidative stress.

Protein	accession	Average SC		Abundance		NSAF ratio Group 2/Group 1	T-Test P-value	Expression
		Group 1	Group 2	Group 1	Group 2			
T-complex protein 1 subunit delta isoform a	38455427	2.7	0	VL	ni	0.00	0.00011	Unique to Lane 1
serine protease inhibitor Kazal-type 2 isoform 1 precursor	413081531	9.7	1.3	L	VL	0.12	0.00297	Underexpressed
tubulin beta-4B chain	5174735	13.7	1.7	L	VL	0.12	0.00703	Underexpressed
nucleobindin-2 isoform X1	578820554	22.7	3.0	M	VL	0.13	0.00677	Underexpressed
peptidyl-prolyl cis-trans isomerase A	10863927	10.3	3.0	L	VL	0.21	0.00463	Underexpressed
lipoprotein lipase precursor	4557727	35.7	7.0	M	VL	0.23	0.01928	Underexpressed
semenogelin-2 precursor	4506885	1321.0	409.0	H	H	0.26	0.00023	Underexpressed
semenogelin-1 preproprotein	4506883	698.7	236.3	H	H	0.26	0.00074	Underexpressed
heat shock-related 70 protein 2	13676857	46.3	25.3	M	M	0.30	0.00554	Underexpressed
14-3-3 protein zeta/delta isoform X2	530389317	20.3	6.3	M	VL	0.32	0.02786	Underexpressed
heat shock protein HSP 90-beta isoform c	431822408	17.7	10.7	L	L	0.35	0.00026	Underexpressed
heat shock protein HSP 90-alpha isoform 1	153792590	70.0	43.0	M	M	0.36	0.01023	Underexpressed
endoplasmin precursor	4507677	16.7	9.0	L	L	0.37	0.00602	Underexpressed
gastric intrinsic factor 1 preproprotein	4505757	49.3	24.7	M	M	0.50	0.00149	Underexpressed
prostate-specific antigen isoform 1 preproprotein	4502173	321.0	225.0	H	H	0.66	0.00839	Underexpressed
serum albumin preproprotein	4502027	741.0	1225.3	H	H	1.51	0.00583	Overexpressed
zinc-alpha-2-glycoprotein precursor	4502337	206.3	272.0	H	H	1.60	0.03459	Overexpressed
epididymal secretory protein E1 precursor	5453678	85.7	146.7	H	H	1.62	0.03894	Overexpressed
alpha-2-macroglobulin isoform X1	578822814	17.0	40.0	L	M	2.01	0.01423	Overexpressed
cysteine-rich secretory protein 1 isoform 1 precursor	25121982	27.3	51.0	M	M	2.05	0.00951	Overexpressed
glycodelin precursor	65507501	25.0	54.7	M	M	2.19	0.00242	Overexpressed
neprilysin isoform X1	578807443	15.0	31.0	L	M	2.22	0.03895	Overexpressed
alpha-1-antitrypsin precursor	189163532	129.3	196.7	H	H	2.23	0.02790	Overexpressed
cathepsin D preproprotein	4503143	39.7	65.3	M	M	2.25	0.00977	Overexpressed
cartilage acidic protein 1 isoform B precursor	330688397	23.0	44.0	M	M	2.47	0.00449	Overexpressed
serpin B6 isoform a	41152086	8.0	15.3	L	L	2.68	0.00424	Overexpressed
serum amyloid P-component precursor	4502133	6.0	15.3	VL	L	2.69	0.00538	Overexpressed
cytochrome c	11128019	2.7	12.0	VL	L	2.84	0.00550	Overexpressed
dipeptidyl peptidase 4	18765694	18.3	47.0	L	M	3.10	0.02836	Overexpressed
alpha-1-antichymotrypsin precursor	50659080	40.7	106.0	M	H	3.23	0.00023	Overexpressed
plasma protease C1 inhibitor precursor	73858570	17.7	60.7	L	M	3.30	0.00049	Overexpressed
peroxiredoxin-4 precursor	5453549	3.0	10.0	VL	L	3.39	0.00099	Overexpressed
protein S100-A9	4506773	4.0	22.7	VL	M	3.77	0.01707	Overexpressed
sialate O-acetyltransferase isoform 1 precursor	24850115	6.7	24.3	VL	M	3.80	0.00592	Overexpressed
IgGfC-binding protein precursor	154146262	16.3	77.7	L	M	5.98	0.00010	Overexpressed
haptoglobin isoform 2 preproprotein	186910296	1.7	10.3	VL	L	9.03	0.00349	Overexpressed
olfactomedin-4 precursor	32313593	3.0	34.3	VL	M	9.37	0.00015	Overexpressed
maltase-glucoamylase, intestinal isoform X1	578814724	3.3	29.3	VL	M	9.55	0.00024	Overexpressed
tetraspanin-1	21264578	0.3	3.0	VL	VL	11.00	0.00074	Overexpressed
glutaminyl-peptide cyclotransferase precursor	6912618	0.3	3.0	VL	VL	12.77	0.00074	Overexpressed
complement C3 precursor	115298678	2.7	62.3	VL	M	17.22	0.00210	Overexpressed
lactoylglutathione lyase	118402586	1.3	17.0	VL	L	17.92	0.00737	Overexpressed
neutrophil gelatinase-associated lipocalin precursor	38455402	0.7	19.3	VL	L	37.47	0.00445	Overexpressed
polymeric immunoglobulin receptor isoform X1	530366266	0.3	28.0	VL	M	73.92	0.00350	Overexpressed

Supplementary Table 2. Differentially expressed proteins (DEPs) with the normalized spectral abundance factor (NSAF) ratio.

Group1: Healthy fertile Donors.

Group2:Patients with secondary infertility.

Protein	accession	Average SC		Abundance		NSAF ratio	T-Test	Expression
		Group 1	Group 8	Group 1	Group 8	Group 8/Group 1	P-value	
semenogelin-2 precursor	4506885	1321.3	1310.0	H	H	0.54	0.001388	Underexpressed
semenogelin-1 preproprotein	4506883	698.7	742.0	H	H	0.59	0.009700	Underexpressed
serotransferrin precursor	4557871	63.3	214.3	M	H	1.52	0.009638	Overexpressed
alpha-1-antichymotrypsin precursor	50659080	40.7	144.0	M	H	1.90	0.000762	Overexpressed
elongation factor 1-alpha 1	4503471	20.3	56.7	M	M	2.02	0.000280	Overexpressed
78 glucose-regulated protein precursor	16507237	8.7	44.3	L	M	2.24	0.048217	Overexpressed
tubulin beta-4B chain	5174735	13.7	44.0	L	M	2.27	0.011258	Overexpressed
creatine kinase B-type	21536286	15.7	53.0	L	M	2.29	0.001589	Overexpressed
cytosolic non-specific dipeptidase isoform X2	530414265	8.7	32.0	L	M	2.37	0.040321	Overexpressed
transmembrane protease serine 2 isoform 2	205360943	8.0	34.0	L	M	2.46	0.004135	Overexpressed
annexin A1	4502101	7.7	33.0	VL	M	2.75	0.012865	Overexpressed
kallistatin isoform 2 precursor	21361302	9.0	41.0	L	M	2.75	0.025892	Overexpressed
purine nucleoside phosphorylase	157168362	4.7	24.0	VL	M	2.79	0.010691	Overexpressed
alpha-2-antiplasmin isoform X1	578840157	11.0	46.0	L	M	2.90	0.016517	Overexpressed
receptor-type tyrosine-protein phosphatase S isoform X1	530425335	5.0	25.3	VL	M	2.92	0.019307	Overexpressed
annexin A2 isoform 1	50845388	4.7	20.0	VL	M	3.06	0.017794	Overexpressed
cullin-associated NEDD8-dissociated protein 1	21361794	4.3	26.3	VL	M	3.10	0.021171	Overexpressed
complement C4-A isoform 1 preproprotein	67190748	7.3	49.7	VL	M	3.19	0.031549	Overexpressed
L-lactate dehydrogenase A chain isoform 1	5031857	5.0	25.3	VL	M	3.25	0.000981	Overexpressed
ras-related protein Rab-27A isoform X2	530406261	3.0	18.0	VL	L	3.28	0.005380	Overexpressed
beta-hexosaminidase subunit alpha preproprotein	189181666	6.3	34.0	VL	M	3.50	0.001906	Overexpressed
ezrin	21614499	2.0	9.7	VL	L	3.50	0.004375	Overexpressed
olfactomedin-4 precursor	32313593	3.0	25.0	VL	M	3.53	0.000465	Overexpressed
beta-galactosidase isoform b	119372312	3.0	22.0	VL	M	3.57	0.002897	Overexpressed
tubulin alpha-1C chain	14389309	9.0	40.3	L	M	3.60	0.001176	Overexpressed
maltase-glucoamylase, intestinal isoform X1	578814724	3.3	29.0	VL	M	3.69	0.010355	Overexpressed
heat shock cognate 71 protein isoform X1	578822169	3.0	27.7	VL	M	4.02	0.002540	Overexpressed
plastin-2 isoform X2	530402335	10.0	65.7	L	M	4.11	0.005525	Overexpressed
legumin preproprotein	56682962	3.0	21.0	VL	M	4.80	0.004225	Overexpressed
alpha-1-acid glycoprotein 2 precursor	4505529	1.7	13.0	VL	L	4.87	0.005891	Overexpressed
lactoylglycathione lyase	118402586	1.3	11.0	VL	L	5.48	0.002352	Overexpressed
alpha-1B-glycoprotein precursor	21071030	1.3	17.0	VL	L	6.11	0.002509	Overexpressed
laminin subunit alpha-5 isoform X1	578835999	1.7	27.0	VL	M	7.06	0.021524	Overexpressed
lipocalin-15 precursor	42714611	0.7	10.0	VL	L	8.39	0.001023	Overexpressed
dipeptidase 3 isoform a precursor	193211608	0.7	13.3	VL	L	10.10	0.002087	Overexpressed
complement C3 precursor	115298678	2.7	92.0	VL	H	15.37	0.004311	Overexpressed
programmed cell death 6-interacting protein isoform 1	22027538	0.7	21.0	VL	M	15.60	0.025954	Overexpressed
adenylyl cyclase-associated protein 1	5453595	0.3	11.3	VL	L	22.01	0.001582	Overexpressed
polymeric immunoglobulin receptor isoform X1	530366266	0.3	29.0	VL	M	45.00	0.003562	Overexpressed
histone H2A type 2-A	4504251	0.3	18.0	VL	L	49.22	0.005117	Overexpressed
ferritin heavy chain	56682959	0.0	2.0	ni	VL	Group 8 only	0.000023	Unique to Group 8
fructose-1,6-bisphosphatase 1	16579888	0.0	6.7	ni	VL	Group 8 only	0.000851	Unique to Group 8
nephronectin isoform A precursor	296011067	0.0	6.0	ni	VL	Group 8 only	0.000262	Unique to Group 8
transforming protein RhoA precursor	10835049	0.0	2.0	ni	VL	Group 8 only	0.000024	Unique to Group 8
ceruloplasmin precursor	4557485	0.0	9.3	ni	L	Group 8 only	0.000125	Unique to Group 8
importin-5 isoform X2	530423350	0.0	12.0	ni	L	Group 8 only	0.000152	Unique to Group 8
lysosomal Pro-X carboxypeptidase isoform 1 preproprotein	4826940	0.0	10.3	ni	L	Group 8 only	0.000232	Unique to Group 8
heat shock 70 protein 1-like isoform X1	530381921	0.0	8.7	ni	L	Group 8 only	0.000495	Unique to Group 8
carboxylesterase 5A isoform 1 precursor	219521907	0.0	14.3	ni	L	Group 8 only	0.000841	Unique to Group 8
kunitz-type protease inhibitor 1 isoform 1 precursor	32313599	0.0	8.0	ni	L	Group 8 only	0.003919	Unique to Group 8
myosin-9	12667788	0.0	17.0	ni	L	Group 8 only	0.004667	Unique to Group 8
amyloid beta A4 protein isoform f precursor	209915573	0.0	8.3	ni	L	Group 8 only	0.006708	Unique to Group 8
alpha-crystallin A chain-like isoform X1	578836360	0.0	51.3	ni	M	Group 8 only	0.045285	Unique to Group 8