

Supplementary Table 1. Proteins detected uniquely in CTR ESCs secretome

Identified Proteins (141)	Uniprot ID	MW (kDa)	Condition (max # unique peptides)	
			Ctrl	Sen
Serotransferrin	TRFE_HUMAN	77	34	0
DNA damage-binding protein 1	DDB1_HUMAN	127	25	0
Aminopeptidase B	AMPB_HUMAN	73	15	0
Thimet oligopeptidase	THOP1_HUMAN	79	15	0
Phosphoserine aminotransferase	SERC_HUMAN	40	13	0
DNA-(apurinic or apyrimidinic site) lyase	APEX1_HUMAN	36	12	0
Glutathione reductase, mitochondrial	GSHR_HUMAN	56	12	0
Transferrin receptor protein 1	TFR1_HUMAN	85	12	0
Glucosamine-6-phosphate isomerase 2	GNPI2_HUMAN	31	11	0
Endoplasmic reticulum aminopeptidase 1	ERAP1_HUMAN	107	10	0
Glucosamine-6-phosphate isomerase 1	GNPI1_HUMAN	33	10	0
Glycogen phosphorylase, liver form	PYGL_HUMAN	97	10	0
Guanine nucleotide-binding protein subunit beta-2-like 1	GBLP_HUMAN	35	10	0
Membrane-bound transcription factor site-1 protease	MBTP1_HUMAN	118	10	0
Vacuolar protein sorting-associated protein 26A	VP26A_HUMAN	38	10	0
Adenosine kinase	ADK_HUMAN	41	9	0
Bifunctional purine biosynthesis protein PURH	PUR9_HUMAN	65	9	0
Ezrin	EZRI_HUMAN	69	9	0
Ig gamma-1 chain C region	IGHG1_HUMAN	36	9	0
Acylamino-acid-releasing enzyme	ACPH_HUMAN	81	8	0
Exostosin-2	EXT2_HUMAN	82	8	0
Glutamate dehydrogenase 1, mitochondrial	DHE3_HUMAN	61	8	0
Proliferation-associated protein 2G4	PA2G4_HUMAN	44	8	0
Alcohol dehydrogenase class-3	ADHX_HUMAN	40	7	0
Aspartyl aminopeptidase	DNPEP_HUMAN	52	7	0
Coatomer subunit delta	COPD_HUMAN	57	7	0
Ig alpha-1 chain C region	IGHA1_HUMAN	38	7	0
Neurolysin, mitochondrial	NEUL_HUMAN	81	7	0
Phosphoribosylformylglycinamide synthase	PUR4_HUMAN	145	7	0
Serpin B8	SPB8_HUMAN	43	7	0
Alpha-mannosidase 2	MA2A1_HUMAN	131	6	0
GTP-binding nuclear protein Ran	RAN_HUMAN	24	6	0
Heterogeneous nuclear ribonucleoprotein A1	ROA1_HUMAN	39	6	0
Heterogeneous nuclear ribonucleoprotein A1-like 2	RA1L2_HUMAN	34	6	0
Ig kappa chain C region	IGKC_HUMAN	12	6	0
Isopentenyl-diphosphate Delta-isomerase 1	IDI1_HUMAN	26	6	0
Leukotriene A-4 hydrolase	LKHA4_HUMAN	69	6	0
Phosphoacetylglucosamine mutase	AGM1_HUMAN	60	6	0
Selenium-binding protein 1	SBP1_HUMAN	52	6	0
Semaphorin-3A	SEM3A_HUMAN	89	6	0
Succinyl-CoA:3-ketoacid coenzyme A transferase 1, mitochondrial	SCOT1_HUMAN	56	6	0
Threonine--tRNA ligase, cytoplasmic	SYTC_HUMAN	83	6	0
60 kDa SS-A/Ro ribonucleoprotein	RO60_HUMAN	61	5	0
Deoxyuridine 5'-triphosphate nucleotidohydrolase, mitochondrial	DUT_HUMAN	27	5	0
Fatty acid-binding protein, adipocyte	FABP4_HUMAN	15	5	0
Fibroblast growth factor 7	FGF7_HUMAN	23	5	0
HLA class I histocompatibility antigen, A-69 alpha chain	1A69_HUMAN	41	5	0
Lipocalin-1	LCN1_HUMAN	19	5	0
NADH-cytochrome b5 reductase 2	NB5R2_HUMAN	31	5	0
Proteasome subunit beta type-5	PSB5_HUMAN	28	5	0
Ras-related protein Rap-1b	RAP1B_HUMAN	21	5	0
SPRY domain-containing protein 4	SPRY4_HUMAN	23	5	0

Thioredoxin-like protein 1	TXNL1_HUMAN	32	5	0
Alpha-1-antitrypsin	A1AT_HUMAN	47	4	0
ATP-dependent RNA helicase DDX1	DDX1_HUMAN	82	4	0
Coatomer subunit gamma-1	COPG1_HUMAN	98	4	0
Eukaryotic translation initiation factor 6	IF6_HUMAN	27	4	0
Glycogen phosphorylase, brain form	PYGB_HUMAN	97	4	0
Ig lambda-2 chain C regions	LAC2_HUMAN	11	4	0
Isochorismatase domain-containing protein 1	ISOC1_HUMAN	32	4	0
Laminin subunit alpha-1	LAMA1_HUMAN	337	4	0
Low-density lipoprotein receptor-related protein 6	LRP6_HUMAN	180	4	0
Neutrophil gelatinase-associated lipocalin	NGAL_HUMAN	23	4	0
PITH domain-containing protein 1	PITH1_HUMAN	24	4	0
Polypeptide N-acetylgalactosaminyltransferase 2	GALT2_HUMAN	65	4	0
Putative deoxyribonuclease TATDN1	TATD1_HUMAN	34	4	0
Putative hydrolase RBBP9	RBBP9_HUMAN	21	4	0
Serpin B9	SPB9_HUMAN	42	4	0
Xaa-Pro aminopeptidase 1	XPP1_HUMAN	70	4	0
3-ketoacyl-CoA thiolase, mitochondrial	THIM_HUMAN	42	3	0
Complement C3	CO3_HUMAN	187	3	0
Desmocollin-3	DSC3_HUMAN	100	3	0
Eukaryotic initiation factor 4A-I	IF4A1_HUMAN	46	3	0
Exostosin-1	EXT1_HUMAN	86	3	0
Fumarylacetoacetate hydrolase domain-containing protein 2A	FAH2A_HUMAN	35	3	0
Hemicentin-1	HMCN1_HUMAN	613	3	0
Hepatocyte growth factor-like protein	HGFL_HUMAN	80	3	0
Histone-binding protein RBBP4	RBBP4_HUMAN	48	3	0
HLA class I histocompatibility antigen, A-2 alpha chain	1A02_HUMAN	41	3	0
HLA class I histocompatibility antigen, Cw-12 alpha chain	1C12_HUMAN	41	3	0
Ig gamma-2 chain C region	IGHG2_HUMAN	36	3	0
Kynurenine--oxoglutarate transaminase 3	KAT3_HUMAN	51	3	0
LanC-like protein 1	LANC1_HUMAN	45	3	0
Matrilin-2	MATN2_HUMAN	107	3	0
Mycophenolic acid acyl-glucuronide esterase, mitochondrial	ABHDA_HUMAN	34	3	0
Myeloperoxidase	PERM_HUMAN	84	3	0
Polymeric immunoglobulin receptor	PIGR_HUMAN	83	3	0
Probable aminopeptidase NPEPL1	PEPL1_HUMAN	56	3	0
Proliferating cell nuclear antigen	PCNA_HUMAN	29	3	0
Protein S100-A7	S10A7_HUMAN	11	3	0
Protein S100-A9	S10A9_HUMAN	13	3	0
Quinone oxidoreductase	QOR_HUMAN	35	3	0
Retinal rod rhodopsin-sensitive cGMP 3',5'-cyclic phosphodiesterase subunit delta	PDE6D_HUMAN	17	3	0
Rho GDP-dissociation inhibitor 2	GDIR2_HUMAN	23	3	0
Sialic acid synthase	SIAS_HUMAN	40	3	0
Transthyretin	TTHY_HUMAN	16	3	0
Trifunctional purine biosynthetic protein adenosine-3	PUR2_HUMAN	108	3	0
UDP-N-acetylhexosamine pyrophosphorylase	UAP1_HUMAN	59	3	0
Vacuolar protein sorting-associated protein 29	VPS29_HUMAN	21	3	0
Zinc-alpha-2-glycoprotein	ZA2G_HUMAN	34	3	0
Aconitate hydratase, mitochondrial	ACON_HUMAN	85	2	0
Aldose 1-epimerase	GALM_HUMAN	38	2	0
Azurocidin	CAP7_HUMAN	27	2	0
Biliverdin reductase A	BIEA_HUMAN	33	2	0
Branched-chain-amino-acid aminotransferase, cytosolic	BCAT1_HUMAN	43	2	0
Branched-chain-amino-acid aminotransferase, mitochondrial	BCAT2_HUMAN	44	2	0
BRO1 domain-containing protein BROX	BROX_HUMAN	46	2	0
Clathrin heavy chain 1	CLH1_HUMAN	192	2	0
Coatomer subunit beta'	COPB2_HUMAN	102	2	0
Complement C1q tumor necrosis factor-related protein 5	C1QT5_HUMAN	25	2	0
Cytosolic non-specific dipeptidase	CNDP2_HUMAN	53	2	0

Delta(3,5)-Delta(2,4)-dienoyl-CoA isomerase, mitochondrial	ECH1_HUMAN	36	2	0
Diphosphoinositol polyphosphate phosphohydrolase 1	NUDT3_HUMAN	19	2	0
Four and a half LIM domains protein 1	FHL1_HUMAN	36	2	0
Galectin-8	LEG8_HUMAN	36	2	0
Glutathione S-transferase Mu 1	GSTM1_HUMAN	26	2	0
Golgi resident protein GCP60	GCP60_HUMAN	61	2	0
Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1	GBB1_HUMAN	37	2	0
Haptoglobin	HPT_HUMAN	45	2	0
HLA class I histocompatibility antigen, A-24 alpha chain	1A24_HUMAN	41	2	0
Hydroxyacyl-coenzyme A dehydrogenase, mitochondrial	HCDH_HUMAN	34	2	0
Ig gamma-4 chain C region	IGHG4_HUMAN	36	2	0
Inositol-3-phosphate synthase 1	INO1_HUMAN	61	2	0
Kynurenine--oxoglutarate transaminase 1	KAT1_HUMAN	48	2	0
Latexin	LXN_HUMAN	26	2	0
Malectin	MLEC_HUMAN	32	2	0
Neurotrophin-3	NTF3_HUMAN	29	2	0
Neutral alpha-glucosidase AB	GANAB_HUMAN	107	2	0
Peroxiredoxin-2	PRDX2_HUMAN	22	2	0
Phospholipid hydroperoxide glutathione peroxidase, mitochondrial	GPX4_HUMAN	22	2	0
Proteasome subunit beta type-7	PSB7_HUMAN	30	2	0
Protein NipSnap homolog 3A	NPS3A_HUMAN	28	2	0
Protocadherin Fat 1	FAT1_HUMAN	506	2	0
Secernin-2	SCRN2_HUMAN	47	2	0
Serpin B4	SPB4_HUMAN	45	2	0
Sorbitol dehydrogenase	DHSO_HUMAN	38	2	0
Stromal cell-derived factor 2	SDF2_HUMAN	23	2	0
Stromal cell-derived factor 2-like protein 1	SDF2L_HUMAN	24	2	0
Tetranectin	TETN_HUMAN	23	2	0
Transmembrane protein 132A	T132A_HUMAN	110	2	0
WD repeat-containing protein 5	WDR5_HUMAN	37	2	0