

Table S1 Human proteins identified by yeast two hybrid screening with Vaccinia WR strain proteins

Bait protein name (Copenhagen nomenclature) and description	Bait A.A. coordinates	Prey protein name and description	Prey A.A. coordinates	Library
WR001(COP-C23) chemokine-binding protein	1-245	EIF2S2 (eukaryotic translation initiation factor 2)	25-169	Breast_cancer/ Prostate_cancer
		HNRPAB (heterogeneous nuclear ribonucleoprotein A/B)	213-331	Breast_cancer/ Prostate_cancer
		KRT4 (keratin 4)	206-397	Tongue_and_ Tonsil
			275-397	Tongue_and_ Tonsil
		PHLDA1(pleckstrin homology-like domain, family A, member 1)	302-400	Breast_cancer/ Prostate_cancer
		PPIG (peptidyl-prolyl isomerase G)	605-695	Breast_cancer/ Prostate_cancer
		RL21(ribosomal protein L21)	57-160	Breast_cancer/ Prostate_cancer
		UBC (ubiquitin C)	1-677	Breast_cancer/ Prostate_cancer
ZC3H11A (zinc finger CCCH-type containing 11A)	170-346	Breast_cancer/ Prostate_cancer		
WR002 (no COP ortholog) Gene fragment, Tumor necrosis factor receptor	1-62	CRYAB (crystallin, alpha B)	-8-176	Tongue_and_ Tonsil
		DNAJB6 (DnaJ (Hsp40) homolog, subfamily B, member 6)	27-242	Tongue_and_ Tonsil
		HSPB1 (heat shock 27 kD protein 1)	-4-206	Tongue_and_ Tonsil
WR019 (COP-C9) ankyrin-like protein	1-250	LSM4 (U6 snRNA-associated Sm-like protein)	5-139	Breast_cancer/ Prostate_cancer
WR021 (COP-C7)host-range; possible host defense modulator	10-130	YAF2 (YY1-associated factor 2)	67-181	Tongue/Tonsil
WR022 (COP-C6) Unknown function	1-152	AP1GBP1 (AP1 gamma subunit binding protein 1)	-10-602	Tongue_and_ Tonsil
		AP2B1 (adaptor-related protein complex 2, beta 1 subunit)	85-337	Tongue_and_ Tonsil
		ATP5F1 (ATP synthase, H+ transporting, mitochondrial F0 complex)	123-253	Tongue_and_ Tonsil
			128-231	Breast_cancer/ Prostate_cancer
		AUP1 (ancient ubiquitous protein 1)	327-464	Breast_cancer/ Prostate_cancer
		BRMS1 (breast cancer metastasis suppressor 1, isoform 1)	31-103	Breast_cancer/ Prostate_cancer

	CDC42BPB (CDC42-binding protein kinase beta)	410-704	Breast_cancer/ Prostate_cancer
	CEP110(entrosomal protein 110 kDa)	2097-2326	Spleen
	CGRRF1 (cell growth regulator with ring finger domain 1)	54-333	Tongue_and_ Tonsil
	CHERP (calcium homeostasis endoplasmic reticulum protein)	-26-165	Breast_cancer/ Prostate_cancer
	CTNNA1 (catenin, alpha 1, alt. transcript)	241-372	Tongue_and_ Tonsil
	CTNNBIP1 (catenin, beta interacting protein 1)	-22-82	Tongue_and_ Tonsil
		21-82	Tongue_and_ Tonsil
	EXOC7 (exocyst complex component 7)	2-262	Tongue_and_ Tonsil
	FYCO1 (FYVE and coiled-coil domain containing 1)	215-375	Tongue_and_ Tonsil
		174-412	Breast_cancer/ Prostate_cancer
	GPS2 (G protein pathway suppressor 2)	32-202	Tongue_and_ Tonsil
	KLC3 (kinesin light chain 3)	126-281	Breast_cancer/ Prostate_cancer
	KRT4(keratin 4)	144-411	Tongue_and_ Tonsil
		140-396	Tongue_and_ Tonsil
		113-411	Tongue_and_ Tonsil
	MBD2 (methyl-CpG binding domain protein 2)	221-412	Tongue_and_ Tonsil
	MYH14 (myosin, heavy chain 14)	1469-1682	Tongue_and_ Tonsil
	Nexilin (F actin binding protein; NELIN)	-9-73	Tongue_and_ Tonsil
	OFD1 (oral-facial-digital syndrome 1)	245-508	Breast_cancer/ Prostate_cancer
	PDCD6IP (programmed cell death 6 interacting protein)	455-700	Tongue_and_ Tonsil
	PDE4DIP (phosphodiesterase 4D interacting protein)	486-805	Tongue_and_ Tonsil
	RAD50 (RAD50 homolog)	416-753	Tongue_and_ Tonsil
		515-745	Spleen
	RANBP2 (RAN binding protein 2)	823-1255	Tongue_and_ Tonsil
	RMP (RBP5-mediating protein, isoform a)	120-297	Tongue_and_ Tonsil
	RUNDC1 (RUN domain containing 1)	163-314	Breast_cancer/ Prostate_cancer

		SEPT6 (septin 6, isoform A)	208-383	Tongue_and_Tonsil
		SEPT8 (septin 8, alt. transcript)	218-428	Tongue_and_Tonsil
		SFPQ (splicing factor proline/glutamine-rich)	501-694	Breast_cancer/Prostate_cancer
		SLK (STE20-like kinase, alt. transcript)	741-1013	Tongue_and_Tonsil
			738-928	Breast_cancer/Prostate_cancer
		STRN (striatin, calmodulin binding protein)	78-352	Tongue_and_Tonsil
		SYNE2 (spectrin repeat containing, nuclear envelope 2, isoform 1)	1685-2025	Tongue_and_Tonsil
		TCHP (trichoplein, keratin filament binding)	192-396	Tongue_and_Tonsil
		TNNI2 (troponin I, skeletal, fast)	-8-149	Tongue_and_Tonsil
		TRIM11 (tripartite motif-containing 11)	6-279	Spleen
		TTN (titin, isoform novex-1)	25273-	Tongue_and_Tonsil
			25533	
		USF2 (upstream stimulatory factor 2, isoform 2)	202-280	Breast_cancer/Prostate_cancer
			200-280	Spleen
		VASP (vasodilator-stimulated phosphoprotein)	228-381	Spleen
		XPA (xeroderma pigmentosum, complementation group A)	49-257	Spleen
WR026 (COP-C2) kelch-like intracellular ptoein	1-250	CRYAB (crystallin, alpha B)	12-176	Tongue_and_Tonsil
			32-176	Tongue_and_Tonsil
			-8-176	Tongue_and_Tonsil
		HSPB1 (heat shock 27 kD protein 1)	-4-206	Tongue_and_Tonsil
			1-206	Tongue_and_Tonsil
WR029 (COP-N2) Unknown function	1-176	AHNAK2 (HNAK nucleoprotein 2)	1472-1624	Breast_cancer/Prostate_cancer
		AP2B1 (adaptor-related protein complex 2, beta 1 subunit, isoform b)	615-938	Spleen
		DEAF1 (deformed epidermal autoregulatory factor 1)	309-566	Breast_cancer/Prostate_cancer

		EPS8L2 (EPS8-like 2)	48-293	Tongue_and_Tonsil
		GOLGA2 (Golgi autoantigen, golgin subfamily a, 2)	166-378	Breast_cancer/Prostate_cancer
		KPNA2 (karyopherin alpha 2)	18-530	Breast_cancer/Prostate_cancer
		KPNA5 (karyopherin alpha 5)	276-540	Spleen
		MFSD3 (major facilitator superfamily domain containing 3)	254-413	Breast_cancer/Prostate_cancer
		MYOM1 (myomesin 1, isoform a)	1561-1686	Tongue_and_Tonsil
			1502-1686	Tongue_and_Tonsil
		PLSCR4 (phospholipid scramblase 4)	-4-330	Tongue_and_Tonsil
		PRDX4 (peroxiredoxin 4)	29-227	Spleen
		R3HCC1 (R3H domain and coiled-coil containing 1)	120-300	Breast_cancer/Prostate_cancer
		RAI14 (retinoic acid induced 14)	836-981	Breast_cancer/Prostate_cancer
			845-981	Spleen
		SMARCC2 (SWI/SNF related, matrix associated, actin dependent regulator of chromatin)	901-1051	Tongue_and_Tonsil
		SON (DNA-binding protein SON, isoform G)	721-1098	Breast_cancer/Prostate_cancer
		TK1 (thymidine kinase 1)	136-235	Breast_cancer/Prostate_cancer
		TXNDC4 (thioredoxin domain containing 4)	198-407	Breast_cancer/Prostate_cancer
		VCPIP1 [valosin containing protein (p97)/p47 complex]	707-1001	Tongue_and_Tonsil
			821-1040	Breast_cancer/Prostate_cancer
WR034 (COP-K3) interferon resistance; host defense modulator	1-89	CIR (CBF1 interacting corepressor)	195-400	Tongue_and_Tonsil
		IL32 (interleukin 32)	-17-235	Tongue_and_Tonsil
		LUC7L (LUC7-like,)	185-326	Breast_cancer/Prostate_cancer
		LZTS2 (leucine zipper, putative tumor suppressor 2)	36-433	Human-MGC-Derived
			88-638	Human-MGC-Derived
			16-670	Human-MGC-Derived

			62-630	Human-MGC-Derived
			210-438	Human-MGC-Derived
			147-637	Human-MGC-Derived
		PALMD (Palmdelphin)	118-492	Tongue_and_Tonsil
			380-552	Tongue_and_Tonsil
			76-491	Tongue_and_Tonsil
		RPS27A (ribosomal protein S27a)	6-157	Tongue_and_Tonsil
			8-157	Breast_cancer/Prostate_cancer
			10-157	Spleen
WR039 (COP-K7) Suppressor of DDX3-mediated IRF activation and INF β promoter induction	1-150	ARNTL (aryl hydrocarbon receptor nuclear translocator-like, isoform a)	232-343	Breast_cancer/Prostate_cancer
		COBL1 (COBL-like 1)	118-373	Spleen
		FLJ10254 (hypothetical protein FLJ10254)	60-274	Tongue_and_Tonsil
		LAD1 (ladinin 1)	14-147	Breast_cancer/Prostate_cancer
		NCOR1 (nuclear receptor corepressor 1)	2082-2334	Spleen
		RILPL1 (Rab interacting lysosomal protein-like 1)	228-594	Tongue_and_Tonsil
			205-394	Spleen
		RL2A (ribosomal protein L27a)	17-149	Breast_cancer/Prostate_cancer
		SNX5 (sorting nexin 5)	-18-246	Spleen
TSPYL2 (TSPY-like 2 (cell division autoantigen 1))	349-535	Tongue_and_Tonsil		
WR043 (COP-F4) ribonucleotide reductase small subunit	1-320	EIF4G2 (eukaryotic translation initiation factor 4 gamma, 2)	367-706	Breast_cancer/Prostate_cancer
		ENAH (enabled homolog, isoform b)	451-570	Breast_cancer/Prostate_cancer
		GPS2 (G protein pathway suppressor 2)	75-326	Tongue_and_Tonsil
		LAMC2 (laminin, gamma 2, isoform b)	633-1112	Breast_cancer/Prostate_cancer
WR049(COP-F10) ser/thr kinase	200-440	FAM21C (family with sequence similarity 21, member C)	828-1193	Breast_cancer/Prostate_cancer

WR059 (COP-E3) Double-stranded RNA binding protein; inhibits antiviral activities of interferon; host-range determinant; host defense modulator	1-191	DHX9 (DEAH (Asp-Glu-Ala-His) box polypeptide 9)	174-300	Breast_cancer/ Prostate_cancer	
		MAST1 (microtubule associated serine/threonine kinase 1)	662-1390	Human-MGC-Derived	
			693-1571	Human-MGC-Derived	
			880-1338	Human-MGC-Derived	
			652-1355	Human-MGC-Derived	
			669-1467	Human-MGC-Derived	
			717-1427	Human-MGC-Derived	
		MAST2 (microtubule associated serine/threonine kinase 2)	887-1208	Breast_cancer/ Prostate_cancer	
			1182-1335	Breast_cancer/ Prostate_cancer	
		MAST4 (microtubule associated serine/threonine kinase family, member 4)	358-770	Breast_cancer/ Prostate_cancer	
			396-752	Breast_cancer/ Prostate_cancer	
			487-786	Breast_cancer/ Prostate_cancer	
			410-931	Breast_cancer/ Prostate_cancer	
		STAU1 (staufen, RNA binding protein 1)	-73-578	Tongue_and_ Tonsil	
			148-577	Breast_cancer/ Prostate_cancer	
171-372	Breast_cancer/ Prostate_cancer				
STAU2 (staufen, RNA binding protein, homolog 2)	7-480	Tongue_and_ Tonsil			
WR063 (COP-E7) Soluble, myristylprotein has N-myristyltransferase target MGxxxS/T/A	1-167	TRAPPC5 (trafficking protein particle complex 5)	-59-189	Human-MGC-Derived	
			-57-188	Human-MGC-Derived	
			5-189	Human-MGC-Derived	
			-14-189	Tongue_and_ Tonsil	
WR064 (COP-E8) Membrane protein may help wrap virosome; associates with IV/IMV and cores; F10L kinase substrate	1-274	ATP6V0C (ATPase, H ⁺ transporting, lysosomal 16kD)	-34-156	Spleen	
			C6ORF166 (chromosome 6 open reading frame 166)	53-204	Spleen
				830-951	Breast_cancer/ Prostate_cancer
			CCDC80 (steroid sensitive gene 1; nuclear envelope protein okuribin)	757-922	Breast_cancer/ Prostate_cancer
				CD2BP2 (CD2 antigen-binding protein 2)	106-342

	CRYAB (crystallin, alpha B)	57-176	Tongue_and_Tonsil
	CTNNB1 (catenin (cadherin-associated protein), beta 1)	466-734	Spleen
		621-782	Spleen
	GTF3C3 (general transcription factor III C, polypeptide 3)	174-227	Breast_cancer/Prostate_cancer
	HLA-B (major histocompatibility complex, class I, B)	80-282	Spleen
	JUP (junction plakoglobin)	96-732	Human-MGC-Derived
		611-746	Human-MGC-Derived
		7-724	Human-MGC-Derived
		479-746	Tongue_and_Tonsil
		411-739	Spleen
		531-738	Breast_cancer/Prostate_cancer
		513-745	Breast_cancer/Prostate_cancer
		410-738	Spleen
	KHDRBS1 (KH domain containing, RNA binding, signal transduction associated 1)	237-444	Spleen
	KIF2C (kinesin family member 2C)	37-217	Breast_cancer/Prostate_cancer
	LARP7 (La ribonucleoprotein domain family, member 7)	-5-566	Breast_cancer/Prostate_cancer
	LPLUNC1 (long palate, lung and nasal epithelium carcinoma associated 1)	406-485	Tongue_and_Tonsil
		408-484	Breast_cancer/Prostate_cancer
	LRIG1 (leucine-rich repeats and immunoglobulin-like domains 1)	441-1094	Tongue_and_Tonsil
	MBTD1 (mbt domain containing 1)	200-411	Spleen
	MYOZ1 (myozenin 1)	75-300	Tongue_and_Tonsil
	NPM1 (nucleophosmin, isoform 1)	-15-69	Breast_cancer/Prostate_cancer
	OBFC2A (oligonucleotide / oligosaccharide-binding fold containing 2A)	152-205	Spleen

		OTG1 (oocyte-testis gene 1)	221-486	Breast_cancer/ Prostate_cancer
		P2RX5 (purinergic receptor P2X, ligand-gated ion channel, 5, isoform A)	40-208	Spleen
			-40-422	Spleen
		PDIA6 (protein disulfide isomerase-associated 6)	10-188	Spleen
		RAB11FIP5 (RAB11 family interacting protein 5)	513-654	Spleen
		RBM12B (RNA binding motif protein 12B)	520-766	Spleen
			534-681	Breast_cancer/ Prostate_cancer
		RNF11 (ring finger protein 11)	106-155	Spleen
		SECISBP2L (SECIS bonding protein 2-like)	25-1057	Tongue_and_ Tonsil
		TPD52 (Tumor protein D52)	-6-184	Breast_cancer/ Prostate_cancer
		UBE3A (ubiquitin protein ligase E3A)	751-875	Spleen
WR065 (COP-E9) DNA polymerase	1-300	SECISBP2L (SECIS bonding protein 2-like)	273-1057	Breast_cancer/ Prostate_cancer
WR073 (COP-I4) Ribonucleotide reductase large subunit	1-220	APPBP2 (amyloid beta precursor protein binding protein 2)	402-510	Breast_cancer/ Prostate_cancer
		C6ORF58 (chromosome 6 open reading frame 58)	57-161	Tongue_and_ Tonsil
		CAND1 (cullin-associated and neddylation-dissociated 1)	1159-1230	Tongue_and_ Tonsil
		CIT (citron)	471-688	Breast_cancer/ Prostate_cancer
		FOXP1 (forkhead box P1)	168-428	Tongue_and_ Tonsil
			154-468	Spleen
			190-437	Spleen
		GOLGA2 (golgi autoantigen, golgin subfamily a, 2)	448-642	Tongue_and_ Tonsil
		HSPB1 (heat shock 27 kD protein 1)	43-205	Tongue_and_ Tonsil
		LOC124220 (hypothetical protein LOC124220, similar to common salivary protein 1)	-32-173	Human-MGC-Derived
			-32-173	Human-MGC-Derived
			-10-19	Tongue_and_ Tonsil
		RAI14 (retinoic acid induced 14)	650-980	Tongue_and_ Tonsil

			842-980	Breast_cancer/ Prostate_cancer
			782-980	Spleen
		ZFPM2 (zinc finger protein, multitype 2)	657-912	Tongue_and_ Tonsil
WR084 (COP-G6) Unknown function	1-166	APPL2 (adaptor protein, phosphotyrosine interaction, PH domain and leucine zipper containing 2)	-36-557	Spleen
		COL4A3 (collagen, type IV, alpha 3, isoform 4)	1309-1442	Tongue_and_ Tonsil
		CWF19L2 (CWF19-like 2, cell cycle control)	49-130	Tongue_and_ Tonsil
		DUSP1 (dual specificity phosphatase 1)	243-368	Tongue_and_ Tonsil
		HLA-DRA (major histocompatibility complex, class II, DR alpha)	104-255	Spleen
		HYPK (Huntingtin interacting protein K)	32-130	Tongue_and_ Tonsil
		LAP3 (leucine aminopeptidase 3)	489-520	Spleen
		LCN1 (lipocalin 1 precursor)	94-177	Tongue_and_ Tonsil
		LMO7 (LIM domain only 7)	146-317	Tongue_and_ Tonsil
		MATN2 (matrilin 2)	19-360	Tongue_and_ Tonsil
		NUS1 (nuclear undecaprenyl pyrophosphate synthase 1 homolog)	160-269	Tongue_and_ Tonsil
		QSCN6 (Sulfhydryl oxidase 1 precursor)	-3-172	Tongue_and_ Tonsil
		RPS23 (ribosomal protein S23)	-6-144	Tongue_and_ Tonsil
		S100A7 (S100 calcium binding protein A7)	-5-89	Tongue_and_ Tonsil
		SBSN (Suprabasin)	-5-125	Tongue_and_T onsil
		SON (DNA-binding protein SON)	2081-2386	Spleen
		ST8SIA4 (ST8 alpha-N-acetylneuraminide alpha-2,8-sialyltransferase 4)	-31-258	Tongue_and_ Tonsil
		TCHP (trichoplein, keratin filament binding)	-44-385	Spleen
		TNNI1 (troponin I, skeletal, slow)	-15-147	Tongue_and_ Tonsil

Protein interactions between Vaccinia and host

WR085 (COP-G7) Vaccinia core protein component of the seven protein complex required for virosomal uptake by viral crescents	1-372	PRKAR2A (protein kinase, cAMP-dependent, regulatory, type II alpha)	-28-146	Tongue_and_Tonsil
WR094 (COP-J2) Thymidine kinase	1-178	PDLIM1 (PDZ and LIM domain 1)	84-276	Tongue_and_Tonsil
		TK1 (thymidine kinase 1)	14-235	Human-MGC-Derived
			6-235	Human-MGC-Derived
			19-235	Human-MGC-Derived
			-13-235	Human-MGC-Derived
			-12-213	Human-MGC-Derived
			14-192	Human-MGC-Derived
			-7-235	Human-MGC-Derived
			13-235	Human-MGC-Derived
			-9-194	Human-MGC-Derived
			-12-235	Human-MGC-Derived
			13-235	Human-MGC-Derived
			-12-235	Tongue_and_Tonsil
			-9-235	Breast_cancer/Prostate_cancer
ZNF (zinc finger protein)	35-177	Breast_cancer/Prostate_cancer		
WR106 (COP-D1) Large subunit of mRNA capping enzyme; transcription termination factor VTF	1-300	NOMO1 (nodal modulator 1)	969-1223	Breast_cancer/Prostate_cancer
		NUP62 (nucleoporin, 62 kD)	330-523	Tongue_and_Tonsil
WR110 (COP-D5) A DNA-independent NTPase essential for DNA replication. There are 4 ts-mutants. D5 has also been implicated in recombination	1-300	ABHD5 (abhydrolase domain containing 5)	-16-350	Spleen
		ANXA1 (annexin A1)	86-347	Tongue_and_Tonsil
			88-347	Tongue_and_Tonsil
			83-347	Breast_cancer/Prostate_cancer
			86-347	Breast_cancer/Prostate_cancer
		ANXA2 (annexin A2,)	71-340	Breast_cancer/Prostate_cancer
COL6A3 (alpha 3 type VI collagen, isoform 1)	1600-3178	Spleen		

Protein interactions between Vaccinia and host

		COPZ1 (coatamer protein complex, subunit zeta 1)	-6-178	Tongue_and_Tonsil
WR141 (COP-A20) Stoichiometric component of the DNA polymerase processivity factor	1-427	LMNB1 (lamin B1)	61-343	Breast_cancer/ Prostate_cancer
		LMNB2 (lamin B2)	51-179	Breast_cancer/ Prostate_cancer
			22-229	Breast_cancer/ Prostate_cancer
WR142 (COP-A22) A late protein essential for concatemer resolution. An E. coli RuvC-like protein with holliday junction resolvase activity	1-188	NUDT5 (nudix (nucleoside diphosphate linked moiety X)-type motif 5)	22-220	Tongue_and_Tonsil
WR150 (COP-A27) IMV surface protein; roles in IMV-cell attachment, fusion, and microtubule transport	1-111	BAP1 (BRCA1 associated protein 1)	485-730	Tongue_and_Tonsil
		KRT4 (keratin 4)	134-415	Tongue_and_Tonsil
			215-407	Tongue_and_Tonsil
		TPM1 (tropomyosin 1 alpha chain)	81-257	Tongue_and_Tonsil
			-20-188	Tongue_and_Tonsil
UNC84B (unc-84 homolog B)	275-464	Tongue_and_Tonsil		
WR171 (COP-A45) Inactive Cu-Zn superoxide dismutase-like in virion	1-126	CEP135 [CEP135 (centrosomal protein 4)]	840-1141	Tongue_and_Tonsil
			781-931	Tongue_and_Tonsil
			725-994	Tongue_and_Tonsil
		SMAD1 (SMAD1 (MAD homolog 1))	246-466	Tongue_and_Tonsil
			159-466	Spleen
		TNIP2 (TNFAIP3 interacting protein 2)	262-430	Spleen
		TRIP11(thyroid hormone receptor interactor 11)	498-781	Tongue_and_Tonsil
			1630-1801	Spleen
		UTRN (Utrophin)	1489-1843	Tongue_and_Tonsil
WR174 (COP-A48) Thymidylate kinase	1-228	BIN1 (bridging integrator 1)	6-182	Tongue_and_Tonsil
		C19ORF60 (chromosome 19 open reading frame 6, alt. transcript)	3-180	Tongue_and_Tonsil

WR195 (COP-B13) SPI-2/CrmA inhibits Fas-mediated apoptosis, IL-1 convertase, lipoxygenase pathway	1-346	MIA3 (melanoma inhibitory activity family, member 3)	1489-1653	Tongue_and_Tonsil
		SLK [STE20-like kinase, alt. transcript (serine/threonine kinase)]	925-1152	Tongue_and_Tonsil
			929-1152	Tongue_and_Tonsil
WR196 (COP-B14) I κ B kinase inhibitor	1-150	CDR2 (paraneoplastic cerebellar degeneration-associated antigen)	103-444	Tongue_and_Tonsil
		KIAA0323 (hypothetical protein KIAA0323)	373-602	Human-MGC-Derived
			138-679	Human-MGC-Derived
			138-679	Human-MGC-Derived
			388-679	Spleen
N4BP1 (Nedd4 binding protein 1)	604-897	Breast_cancer/Prostate_cancer		
WR209 (no COP-ortholog) Unknown function	1-332	EGLN1 [EGL nine (C. elegans) homolog 1]	158-426	Spleen
		F8 (coagulation factor VIII)	926-1218	Spleen
WR227 (no COP ortholog) Unknown function	1-73	ATP2A3 (ATPase, Ca ⁺⁺ transporting, ubiquitous, isoform a)	36-206	Tongue_and_Tonsil
WR242 (no COP ortholog) Unknown function	1-116	CAMLG (calcium modulating ligand)	-12-165	Spleen
WR258 (no COP ortholog) Unknown function	1-58	SET (SET translocation, myeloid leukemia-associated, alt. transcript alpha)	112-247	Breast_cancer/Prostate_cancer
WR282 (no COP ortholog) Unknown function	1-61	STAT4 (signal transducer and activator of transcription 4)	479-679	Spleen

WR: Western Reserve strain, COP: Copenhagen strain.