

SUMO, SUMOpro and SUMOstar expressed proteins

PROTEIN	REFERENCE	Type	Size (kDa)	Expression	Family
(*) SUMOstar (†) SUMOpro					
3C-like (3CL) protease	http://www.ncbi.nlm.nih.gov/pubmed/16211506	Viral membrane protein	33.8	E. coli	SARS coronavirus (SARS-CoV) membrane protein
5'nucleotidase-related apyrase (5'Nuc)	http://www.ncbi.nlm.nih.gov/pubmed/20351782	Saliva protein (apyrase)	65	E. coli	5'nucleotidase-related proteins
Actinohivin (AH)	http://handle.dtic.mil/100.2/ADA520566	Lectin	12.5	E. coli	Anti-HIV lectin of CBM family 13
Alastin, atl(1-422) (pJM781) and atl(1-328)	http://www.ncbi.nlm.nih.gov/pubmed/21690399	GTP-dependent membrane fusion protein	49 and 37	E. coli	hereditary spastic paraplegia (HSP)
* ALG-2 (apoptosis-linked gene 2)-interacting protein X (Alix)	http://www.ncbi.nlm.nih.gov/pubmed/20670214	Cytoplasmic protein	100	Mammalian	Hck (haemopoietic cell kinase) SH3 domain interactor
<i>Allium sativum</i> leaf agglutinin (ASAL)	http://www.ncbi.nlm.nih.gov/pubmed/20100526	Sugar-binding protein	25	E. coli	Mannose-binding lectins
Antibacterial peptide CM4 (ABP-CM4)	http://www.ncbi.nlm.nih.gov/pubmed/19582446	Antibacterial peptide	3.8	E. coli	Cecropin family of antimicrobial peptides
Antitumor-analgesic peptide (AGAP)	http://www.ncbi.nlm.nih.gov/pubmed/20945481	Antitumor-analgesic peptide	7	E. coli	Multifunction scorpion peptide
Anti-VEGF165 single-chain variable fragment (scFv)	http://www.ncbi.nlm.nih.gov/pubmed/18795288	Antibody	30	E. coli	Small antibody-engineered antibody
Aprotinin/Basic pancreatic trypsin inhibitor (BPTI)	http://www.ncbi.nlm.nih.gov/pubmed/19152836	Inhibitor	6.5	E. coli	Kunitz-type inhibitor
Archaeal Argonaute family proteins	submitted				
Arginine deiminase, <i>P. aeruginosa</i> (Pa-ADI)	http://www.ncbi.nlm.nih.gov/pubmed/19250673	Anticancer bacterial protein	46	E. coli	Guanidine-modifying enzyme (GME) superfamily
† Artemin (ARTN)	http://www.ncbi.nlm.nih.gov/pubmed/21907286	Neurotrophic growth factor	24	E. coli	GDNF family
B-cell activating factor, dove (doBAFF)	http://www.ncbi.nlm.nih.gov/pubmed/19117613	Activating factor	15	E. coli	Tumor necrosis factor (TNF) family
B-cell activating factor, zebrafish (zBAFF)	http://www.ncbi.nlm.nih.gov/pubmed/20382231	Activating factor	18	E. coli	Tumor necrosis factor (TNF) family
† Biotin carboxylase carrier protein (BCCP), human	http://www.ncbi.nlm.nih.gov/pubmed/21343300	Enzyme		E. coli	C-terminal 67 amino acids of the BCCP domain of propionyl-CoA carboxylase
BosR (BB0647) DNA-binding protein in <i>Borrelia burgdorferi</i>	http://www.ncbi.nlm.nih.gov/pubmed/21347346	Regulatory protein	18.7	E. coli	Fur/PerR family of transcriptional regulators
Brazzein	http://www.ncbi.nlm.nih.gov/pubmed/18221889	Sweet-tasting protein	6.5	E. coli	Cysteine stabilized α -helical and β -sheet

					(CSaβ) family
Capsid protein (Cap) of PCV2	http://www.ncbi.nlm.nih.gov/pubmed/20646322	Capsid protein	26	E. coli	Viral capsid protein
Caspase recruitment domain, <i>P. aeruginosa</i> (Pa-CARD)	http://www.ncbi.nlm.nih.gov/pubmed/19250673	Anticancer bacterial protein	17	E. coli	CARD-containing proteins
Catalytic module of Curdlan synthase (cm-CrdS)	http://www.ncbi.nlm.nih.gov/pubmed/20473714	Membrane protein	32	E. coli	Glycosyltransferase Family 2 (GT2)
Cathelin-related antimicrobial peptide (CRAMP), mouse	http://www.ncbi.nlm.nih.gov/pubmed/20713107	Host defense peptides (HDP)	4	E. coli	Cathelin-related antimicrobial peptide Cecropin family of antimicrobial peptides
Cecropin AD	http://www.ncbi.nlm.nih.gov/pubmed/19546372	Antibacterial peptide	3.8	E. coli	RNA- induced transcriptional silencing (RITS) complex
Chp1 (residues 15-75)	http://www.ncbi.nlm.nih.gov/pubmed/19362535	Chromodomain protein	108	E. coli	Histone-lysine methyltransferase family
Clr4 chromodomain	http://www.ncbi.nlm.nih.gov/pubmed/19362535	Silencing factor	55.9	E. coli	Collagen Prolyl 4-hydroxylases (P4Hs)
* CPE, R ₉ , G ₄ S, E ₉ , rGel fusions (five variants)	http://www.ncbi.nlm.nih.gov/pubmed/21303546	Active Site	~230	E. coli	Cyanovirin-N family
Cr-P4H-1-G30	http://www.ncbi.nlm.nih.gov/pubmed/17940281	Antiviral protein	11	E. coli	
Cyanovirin-N (CVN)	http://www.ncbi.nlm.nih.gov/pubmed/19547966				
D-Amino acid oxidase	submitted				
DsrI (Dextranucrase)		Enzyme			
‡ Distal-less homeobox 3, mouse (DLX3)	http://www.ncbi.nlm.nih.gov/pubmed/21268066	Transcription factor	32	E. coli	Distal-less homeobox (DLX) protein
E3 domain (third EGF motif of Del1, mouse)	http://www.ncbi.nlm.nih.gov/pubmed/20171188	Epidermal growth factor	13.7	E. coli	Epidermal growth factor (EGF) family
E5/sub2	http://www.ncbi.nlm.nih.gov/pubmed/20713107	Host defense peptide	1.6	E. coli	
E6/sub3	http://www.ncbi.nlm.nih.gov/pubmed/20713107	Host defense peptide	1.6	E. coli	
EAK(16)	http://www.ncbi.nlm.nih.gov/pubmed/21586326	Self-assembling peptide	1.7	E. coli	Novel class of self-assembling peptides
C-terminal half of human juvenile myoclonic epilepsy protein EFHC1 (EFHC1C)	http://www.ncbi.nlm.nih.gov/pubmed/18593566	Binding domain	27	E. coli	EF-hand superfamily
EF-Tu, elongation factor from <i>E. coli</i>	submitted	Hormone		E. coli	
Enhanced Green fluorescent protein (eGFP)	http://www.ncbi.nlm.nih.gov/pubmed/20457256	Fluorescent protein	27	E. coli	GFP family
ERM-binding phosphoprotein of 50 kD/Na ⁺ -H ⁺ exchanger regulatory factor (EBP50/NHERF1)	http://www.ncbi.nlm.nih.gov/pubmed/20937695	Microvillar scaffolding protein	50	E. coli	Ezrin-radixin-moesin (ERM) family of membrane-cytoskeletal linking proteins

Exendin(9–39)	http://www.ncbi.nlm.nih.gov/pubmed/18248821	Ligand	3.4	E. coli	Glucagon-secretin family
Exendin-4	http://www.ncbi.nlm.nih.gov/pubmed/18248821	Ligand	4.1	E. coli	Glucagon-secretin family
* FANCD2(1–762)	http://www.ncbi.nlm.nih.gov/pubmed/20154706	Regulatory/repair protein	156	Insect/BEVS	Fanconi anemia complementation group D2
* FANCI	http://www.ncbi.nlm.nih.gov/pubmed/20154706	Regulatory/repair protein	142	Insect/BEVS	Fanconi anemia complementation group I
FANCL	http://www.ncbi.nlm.nih.gov/pubmed/20154706	Ligase	43	E. coli	Fanconi anemia complementation group L
Flagellar basal body rod protein (Flig)	http://www.ncbi.nlm.nih.gov/pubmed/21895793	Flagellar protein		E. coli	
Fibroblast growth factor 21 (FGF21)	http://www.ncbi.nlm.nih.gov/pubmed/20163718	Growth factor	19.4	E. coli	FGF family
Filaggrin-2 (FLG2), human skin	http://www.ncbi.nlm.nih.gov/pubmed/19384417	Filament-associated proteins	248	E. coli	S100 fused-type protein (SFTP) family
FK506 binding domain, <i>Plasmodium vivax</i> (PvFKBD)	http://www.ncbi.nlm.nih.gov/pubmed/20572013	Binding domain	14.7	E. coli	FKBP family proteins
Foot and Mouth Disease (FMDV) capsid proteins	submitted				
Full-length holocarboxylase synthetase, human (FL-HCS)	http://www.ncbi.nlm.nih.gov/pubmed/19740736	Chromatin protein	83	E. coli	
Glucosyltransferase (Gtf3)	http://www.ncbi.nlm.nih.gov/pubmed/21653318	Enzyme	76	E. coli	Serine-rich repeat glycoproteins (SRRPs)
Glucagon-like peptide-1 (GLP-1)	http://www.ncbi.nlm.nih.gov/pubmed/18248821	Hormone	3.3	E. coli	Glucagon receptor family
Groucho Q domain	http://www.ncbi.nlm.nih.gov/pubmed/20732424				Transducin-like enhancer of split (TLE) family corepressors
GSTx2, implicated in (DDT) resistance	http://www.ncbi.nlm.nih.gov/pubmed/17785190	Enzyme		E. coli	Glutathione transferase (GST) gene family in the dengue vector <i>Aedes aegypti</i>
Guanylate cyclase catalytic domain (CYG12)	http://www.ncbi.nlm.nih.gov/pubmed/18842118	Membrane receptor	~110	E. coli	Guanylate cyclase receptor family
hBD-1, β -Defensin-1, human	submitted				
Heat shock protein (hsp70) from <i>Trypanosoma carassii</i>	http://www.ncbi.nlm.nih.gov/pubmed/19527750				
Heparin-binding epidermal growth factor	http://www.ncbi.nlm.nih.gov/pubmed/19950003	Epidermal growth factor	8	E. coli	EGF family

(HB-EGF)

HHC-10	http://www.ncbi.nlm.nih.gov/pubmed/20713107	Host defense peptide (HDP)	1.4	E. coli	EF-hand superfamily of Ca(2+)-binding proteins
HIV gp120 peptide	submitted				
HsBCCP, C-terminal 67 amino acids of the biotin-carboxyl carrier protein (BCCP) domain	http://www.ncbi.nlm.nih.gov/pubmed/21343300	Substrate fragment		E. coli	BCCP domain of propionyl-CoA carboxylase
hsp70 (<i>Trypanosoma carassii</i>)	http://www.ncbi.nlm.nih.gov/pubmed/19527750	Heat Shock protein	70	E. coli	70 kDa Heat Shock Protein family
Human aspartyl-tRNA synthetase (hDRS)	http://www.ncbi.nlm.nih.gov/pubmed/17434317				
Human epidermal growth factor (hEGF)	http://www.ncbi.nlm.nih.gov/pubmed/17073723				
Human Hemangiopoietin (hHAPO)	http://www.ncbi.nlm.nih.gov/pubmed/20618138				
Human holocarboxylase synthetase (58-HCS and FL-HCS)	http://www.ncbi.nlm.nih.gov/pubmed/19740736				
Human IL-18	submitted				
Human IL-21	submitted				
Human IL-23	submitted				
Human Keratinocyte Growth Factor 2 (hKGF-2)	http://www.ncbi.nlm.nih.gov/pubmed/19104760				
Human MAP kinase	submitted				
Human mitochondrial transduction domain transcription factor A (MTD-TFAM)	http://www.ncbi.nlm.nih.gov/pubmed/19460293	Activator	29	E. coli	High mobility group (HMG) protein family
Human Oxidoreductase	submitted				
N-terminal domain of dynein intermediate chain (IC)	http://www.ncbi.nlm.nih.gov/pubmed/20472935	Dynein Intermediate Chain Complex	<74	E. coli	
Immunomodulatory peptide (IDR-1), antimicrobial host defense peptides (HDP)	http://www.ncbi.nlm.nih.gov/pubmed/20713107				
Interleukin 1 β , canine (IL-1 β)	http://www.ncbi.nlm.nih.gov/pubmed/16893658	Cytokine	31	E. coli	Interleukin 1 cytokine family
Interleukin-3 (IL-3)	submitted	Cytokine	28	Insect/BEVS	
Interleukin-5 (IL-5)	submitted	Cytokine		Insect/BEVS	
Interleukin-8 (IL-8)	http://www.ncbi.nlm.nih.gov/pubmed/21530580	Cytokine		E. coli	
ITK protein	submitted				TEC Kinase family
Kallikrein 3/Prostate-specific antigen (KLK3/PSA)	submitted	Glycoprotein	34	BEVS	Kallikrein family of serine proteases

KcsA K ⁺ channel (membrane spanning N-Cys peptides)	http://www.ncbi.nlm.nih.gov/pubmed/19803500				
Lactate dehydrogenase (LdhB) protein	http://www.ncbi.nlm.nih.gov/pubmed/17551728				
Lagos bat virus membrane protein (LAG M)	http://www.ncbi.nlm.nih.gov/pubmed/18391421				
Lethal Factor (N29C-LF _N ²⁹⁻²⁶³), Anthrax	http://www.ncbi.nlm.nih.gov/pubmed/20180595	enzymatic moiety	90	E. coli	Protective-Antigen (PA) binding domain
Liver X Receptor (LXR)	submitted				
LL37	http://www.ncbi.nlm.nih.gov/pubmed/20713107	Antimicrobial host defense peptides (HDP)			
Luffin P1 peptides	http://www.ncbi.nlm.nih.gov/pubmed/21195767				
Lycotoxin-1 insecticidal peptide	http://www.ncbi.nlm.nih.gov/pubmed/18465835				
Matrix (M) from VSV serotype New Jersey (VSV _{NJ})	http://www.ncbi.nlm.nih.gov/pubmed/19112510				
Matrix (M) protein from Lagos bat virus (LBV)	http://www.ncbi.nlm.nih.gov/pubmed/19112510				
Matrix metalloproteinase-13 (MMP13/Collagenase-3)	http://www.ncbi.nlm.nih.gov/pubmed/20457256	Enzyme			
MbtA, adenylation enzyme	http://www.ncbi.nlm.nih.gov/pubmed/18928302	Adenylation enzyme	62	E. coli	Aryl Acid Adenylating Enzymes
mCherry (Fluorescent Protein) fused to peptides (3 motifs)	http://www.ncbi.nlm.nih.gov/pubmed/21316369	Peptide motifs		E. coli	Preferential binding to ischemic heart tissue
MD145 norovirus polymerase (Pol)	http://www.ncbi.nlm.nih.gov/pubmed/15681440	Polymerase	57	E. coli	
Metallothionein (MT)	http://www.ncbi.nlm.nih.gov/pubmed/19208897	Membrane (Golgi) protein		E. coli	
Methionine 58 holocarboxylase synthetase, human (58-HCS)	http://www.ncbi.nlm.nih.gov/pubmed/19740736	Chromatin protein	74	E. coli	
MMP-2-resistant variant of SDF-1, [SSDF-1 (SV4)]	http://www.ncbi.nlm.nih.gov/pubmed/21403096	Chemokine	8	E. coli	Chemokine family
Mps1 N-terminal domain (M-NTD)	http://www.ncbi.nlm.nih.gov/pubmed/19120698	Kinase enzyme		E. coli	Mps1 family of kinases
† Mitochondrial Transduction Domain - Transcription Factor A, Mitochondrial, human (MTD-TFAM)	http://www.ncbi.nlm.nih.gov/pubmed/19460293	Mitochondrial membrane protein	29 or 28.4	E. coli	HMG-family protein
Mx226	http://www.ncbi.nlm.nih.gov/pubmed/20713107	Host defense peptide (HDP)	1.7	E. coli	
Myostatin peptide/growth differentiating factor-8 (GDF8)	http://www.ncbi.nlm.nih.gov/pubmed/16322573	Glycoprotein	12	E. coli	TGF-β family
Nonstructural protein 3 (NS3) variants, hepatitis C virus (HCV)	http://www.ncbi.nlm.nih.gov/pubmed/19153239	Helicase, NTPase, and protease	68	E. coli	DExH/D-box family of proteins
Nonstructural protein 4 (NS4A) variants, hepatitis C virus (HCV)	http://www.ncbi.nlm.nih.gov/pubmed/19153239	Cofactors	6	E. coli	DExH/D-box family of proteins

NS3-4A, hepatitis C virus (HCV)	http://www.ncbi.nlm.nih.gov/pubmed/21047963	Membrane enzyme complex	76	E. coli	
Nucleocapsid protein (Nc)	http://www.ncbi.nlm.nih.gov/pubmed/16211506	Viral membrane protein	46	E. coli	SARS coronavirus (SARS-CoV) membrane protein
Outer membrane protein B (OmpB)	http://www.ncbi.nlm.nih.gov/pubmed/21444665	Membrane (virulence) Protein	120	E. coli	Autotransporters, family of proteins in Gram-negative bacteria
Parkin	submitted				
PCBP1	submitted				
Pyruvate dehydrogenase phosphatase catalytic subunit (PDP1c)	http://www.ncbi.nlm.nih.gov/pubmed/20208177	Kinase	50	E. coli	PPM protein family
Pyruvate dehydrogenase phosphatase catalytic subunit (PDP2c)	http://www.ncbi.nlm.nih.gov/pubmed/20208177	Kinase	42	E. coli	PPM protein family
* PfM6T α	http://www.ncbi.nlm.nih.gov/pubmed/19465059	Membrane protein	33	Insect/BEVS	M6T family
* PfM6T β	http://www.ncbi.nlm.nih.gov/pubmed/19465059	Membrane protein	43	BEVS	M6T family
* PfM6T γ	http://www.ncbi.nlm.nih.gov/pubmed/19465059	Membrane protein	34	Insect/BEVS	M6T family
Photoactivated adenyl cyclase (bPAC)	http://www.ncbi.nlm.nih.gov/pubmed/21030594	Lyase enzyme	38.5	E. coli	PAC family
Poliovirus 3AB	submitted			E. coli	
Polo-box domain (PBD) of Plk1	http://www.ncbi.nlm.nih.gov/pubmed/18599640	Binding partner	35	E. coli	Polo-like kinases family
Polyglutamine (Poly-Q) fibril forming peptide	http://www.ncbi.nlm.nih.gov/pubmed/21943395	Fibril forming peptide	30-46	E. coli	Poly-Q
Prestin (SLC26A5) STAS domain	http://www.ncbi.nlm.nih.gov/pubmed/20471983	Membrane protein	~3	E. coli	Mammalian solutelinked carrier 26 (SLC26) anion exchangers
Prolactin1 (PRL1), zebrafish	http://www.ncbi.nlm.nih.gov/pubmed/19584915	Hormone	20	E. coli	PRL1/PRL2 family
Prolactin2 (PRL2), zebrafish	http://www.ncbi.nlm.nih.gov/pubmed/19584915	Hormone antibody	27	E. coli	PRL1/PRL2 family
PTH(1-34)	http://www.ncbi.nlm.nih.gov/pubmed/18248821	Hormone	4.1	E. coli	Parathyroid hormone family
PTH(1-84)	http://www.ncbi.nlm.nih.gov/pubmed/18248821	Hormone	9	E. coli	Parathyroid hormone family
PYL1	http://www.ncbi.nlm.nih.gov/pubmed/19898420	Signaling protein	31	E. coli	PYR/PYL/RCAR family of START proteins
Rad51 capsid protein	http://www.ncbi.nlm.nih.gov/pubmed/18467498	DNA repair factor	37	E. coli	Rad51 protein family
RecA protein	http://www.ncbi.nlm.nih.gov/pubmed/18467498	DNA repair factor	38	E. coli	RecA protein family
Renalase1, human renalase/Monoamine oxidase-C (MAO-C)	http://www.ncbi.nlm.nih.gov/pubmed/20302943	Hormone-like protein	38	E. coli	New class of FAD-containing monoamine oxidases
Ribonuclease inhibitor (RI), murine	http://www.ncbi.nlm.nih.gov/pubmed/21292012	Inhibitor	50	E. coli	Mammalian RI family

RNA-dependent RNA polymerase (nsP4)	http://www.ncbi.nlm.nih.gov/pubmed/19036396	Polymerase	28	E. coli	Polymerase
Rpt2	http://www.ncbi.nlm.nih.gov/pubmed/18796432	Regulatory	49	E. coli	Regulatory particle triple-A ATPase, that form a distinct family within the AAA superfamily
Rpt5	http://www.ncbi.nlm.nih.gov/pubmed/18796432	Regulatory	49	E. coli	Regulatory particle triple-A ATPase, that form a distinct family within the AAA superfamily
RvCD _L , variant of Rv1739c STAS domain	http://www.ncbi.nlm.nih.gov/pubmed/20471983	Membrane protein	15.7	E. coli	SuLP anion transporters
RvCD _S , variant of Rv1739c STAS domain	http://www.ncbi.nlm.nih.gov/pubmed/20471983	Membrane protein	14	E. coli	SuLP anion transporters
SA2 amphiphilic oligopeptide	http://www.ncbi.nlm.nih.gov/pubmed/20687533	Self-assembling peptide	1.2	E. coli	Novel class of self-assembling peptides
SigD (Sigma factor σ^D)	http://www.ncbi.nlm.nih.gov/pubmed/20233303	Bacterial transcription initiation factor		E. coli	Sigma factor protein family
* Secretory phospholipase A ₂ , murine (sPLA ₂)	http://www.ncbi.nlm.nih.gov/pubmed/18539905	Secretory enzyme	18	Mammalian	Group IIE sPLA ₂ Family
* Secretory phospholipase A ₂ , murine (sPLA ₂)	http://www.ncbi.nlm.nih.gov/pubmed/18539905	Secretory enzyme	28	Mammalian	Group III sPLA ₂ Family
* Secretory phospholipase A ₂ , murine (sPLA ₂)	http://www.ncbi.nlm.nih.gov/pubmed/18539905	Secretory enzyme	14	Mammalian	Group V sPLA ₂ Family
* Secretory phospholipase A ₂ , murine (sPLA ₂)	http://www.ncbi.nlm.nih.gov/pubmed/18539905	Secretory enzyme	15	Mammalian	Group X sPLA ₂ Family
SMARCAL1	submitted				SWI/SNF family of proteins
SmyD1	http://www.ncbi.nlm.nih.gov/pubmed/20943667	Transcriptional regulator	57	E. coli	SmyD family (SET/MYND domains)
SmyD3	http://www.ncbi.nlm.nih.gov/pubmed/21167177	Transcriptional regulator	49	E. coli	SmyD family (SET/MYND domains)
Soybean calmodulin isoform 4 (SCaM4)	http://www.ncbi.nlm.nih.gov/pubmed/19667066	Regulatory enzyme	17	E. coli	sCaM4 isoform
Spike C (Spk C)	http://www.ncbi.nlm.nih.gov/pubmed/16211506	Viral membrane protein	58	E. coli	SARS coronavirus (SARS-CoV) membrane protein
SPINK6	http://www.ncbi.nlm.nih.gov/pubmed/20667819	Inhibitor	8	E. coli	Kallikrein-related peptidases (KLK)
SPINK9/LEKTI2 (Lympho-Epithelial-Kazal-type-Inhibitor 2)	http://www.ncbi.nlm.nih.gov/pubmed/19190773	Antimicrobial peptide	7	E. coli	Kallikrein-related peptidases (KLK)
Steroid receptor coactivator-3 (SRC3) fragment	http://www.ncbi.nlm.nih.gov/pubmed/20086010	nuclear receptor coactivator	~15	E. coli	p160 SRC family
Stromal cell-derived factor-1 (SDF-1 α)	http://www.ncbi.nlm.nih.gov/pubmed/17875967	Chemokine	7.9	E. coli	Chemokine family
Suppressors of T-cell receptor signaling 1 (Sts1)	http://www.ncbi.nlm.nih.gov/pubmed/16429130	Membrane (endocytic) proteins	52.5	E. coli	ERG4/ERG24 family

Swi6	http://www.ncbi.nlm.nih.gov/pubmed/19362535	Transcription cofactor	37.2	E. coli	Heterochromatin Protein 1
Syntaxin-1A (Syx1A)	http://www.ncbi.nlm.nih.gov/pubmed/20133592	Membrane protein (neuronal)	35	E. coli	(HP1) family protein VAMP family, SNARE protein
T4 bacteriophage helicase	submitted				
Teladorsagia circumcincta apyrase-1 (Tci-APY-1)	http://www.ncbi.nlm.nih.gov/pubmed/21208222	Plasma membrane-bound protein	38.5	E. coli	Apyrase enzyme family
TGF- β Related Growth Factor	submitted				
Transcription Factor 4 (Tcf4) peptide	submitted				
* Tryptase β -II, human (hTPSB2)	http://www.ncbi.nlm.nih.gov/pubmed/18713650	Enzyme	38	Insect/BEVS	Peptidase family S1
TsDHN-1 (acidic)	http://www.ncbi.nlm.nih.gov/pubmed/21970344	Dehydrins	30.1		Group 2 late embryogenesis abundant (LEA) proteins
TsDHN-2 (basic)	http://www.ncbi.nlm.nih.gov/pubmed/21970344	Dehydrins	21.4		Group 2 late embryogenesis abundant (LEA) proteins
Tumor necrosis factor (TNF)- α	http://www.ncbi.nlm.nih.gov/pubmed/20363332	Cytokine/transmembrane	51	E. coli	Type II transmembrane protein
* Ubiquitin binding protein 43, murine (UBP43)	http://www.ncbi.nlm.nih.gov/pubmed/18713650	De-conjugating enzyme	43	Insect/BEVS	UBP family of deubiquitylating enzymes (DUBs)
* Ubiquitin specific peptidase 15 (USP15)	http://www.ncbi.nlm.nih.gov/pubmed/18713650	Enzyme	112	Insect/BEVS	UBP family of deubiquitylating enzymes (DUBs)
* Ubiquitin specific peptidase 4 (USP4)	http://www.ncbi.nlm.nih.gov/pubmed/18713650	Enzyme	110	Insect/BEVS	UBP family of deubiquitylating enzymes (DUBs)
Uracil-DNA glycosylase-2 (UNG2)	http://www.ncbi.nlm.nih.gov/pubmed/20870715	Base excision repair (BER) enzyme	35	E. coli	Base excision repair (BER) enzymes
Urodilatin, human	http://www.ncbi.nlm.nih.gov/pubmed/18189135	Hormone	3.5	E. coli	A-type natriuretic peptides (ANP) family
VAMP2/synaptobrevin	http://www.ncbi.nlm.nih.gov/pubmed/20603329	Membrane protein	25	E. coli	VAMP family, SNARE protein
Viral Integrase proteins	submitted				
Vitronectin (VTN)	http://trace.tennessee.edu/utk_chanhonoproj/1237/	Glycoprotein	75	E. coli	Pexin family
WCBD4-6 (domains 4-6 of Wilson disease protein (ATP7B))	http://www.ncbi.nlm.nih.gov/pubmed/20799727	Membrane protein		E. coli	copper-transporting member of the P-type ATPase superfamily
Wnt peptide	submitted				
YcbW (ZapC)	http://www.ncbi.nlm.nih.gov/pubmed/21216997	Cytoplasmic protein	20	E. coli	FtsZ-binding component of the Z-ring
Z dependent protease inhibitor (ZPI)	submitted				
Zinc metalloprotease B (ZmpB)	http://www.ncbi.nlm.nih.gov/pubmed/21098102	Viral protein	35	E. coli	Extracellular matrix (ECM) protein
β -Catenin peptide	submitted				

β -defensins 4, human (hBD4)	http://www.ncbi.nlm.nih.gov/pubmed/20526896	Antimicrobial peptide	6	E. coli	β -Defensin family peptides
β -Glucuronidase	submitted				
γ -glutamyltranspeptidase (γ -GGT)	http://www.ncbi.nlm.nih.gov/pubmed/21327888	Extracellular enzyme	61.2	E. coli	Extracellular Enzyme