

### Supplementary Dataset 3:

**This dataset contains the viral hormone sequences which did not give any significant hits to any predicted protein in known viral genomes (threshold E-value  $\leq 0.05$  using tBlastn).** The viral genome database (ref\_viruses\_rep\_genomes.tar.gz,ftp://ftp.ncbi.nlm.nih.gov/blast/db/) was downloaded from NCBI and searched for the hormone peptide sequences reported in **Extended Dataset 1**. The name of the human protein is reported at the top of every new hit. **PART A** reports the results obtained using the whole sequences of the proteins for the database search. **PART B** (p. 20) reports processed sequences of the hormones collected from Uniprot database. The processed sequences are obtained from Uniprot and reported at the second part of the document with Uniprot naming ( e.g: >sp|O00253|21-82), the second part of the name (O00253) is the code of the protein at Uniprot database and can be used for Uniprot search. The third part (21-82) shows the peptides position within the precursor sequence. The names of the pro-opiomelanocortin and glucagon-related hormones are also reported at the title.

#### 1. Human Glucagon

Query= sp|P01275|GLUC\_HUMAN Glucagon OS=Homo sapiens GN=GCG PE=1 SV=3

Length=180

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.317	0.131	0.381	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 6246711324

#### 2. Human Agouti-related protein

Query= sp|O00253|AGRP\_HUMAN Agouti-related protein OS=Homo sapiens GN=AGRP PE=1 SV=1

Length=132

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.328	0.140	0.482	0.792	4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 2654470356

### **3. Human Pro-opiomelanocortin**

Query= sp|P01189|COLI\_HUMAN Pro-opiomelanocortin OS=Homo sapiens GN=POMC  
PE=1 SV=2

Length=267

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda        K            H            a            alpha  
      0.315    0.134       0.420       0.792       4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 13169263800

### **4. Human Leptin**

Query= sp|P41159|LEP\_HUMAN Leptin OS=Homo sapiens GN=LEP PE=1 SV=1

Length=167

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda        K            H            a            alpha  
      0.321    0.135       0.415       0.792       4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 5220430996

### **5. Human Cholecystokinin**

Query= sp|P06307|CCKN\_HUMAN Cholecystokinin OS=Homo sapiens GN=CCK PE=1  
SV=1

Length=115

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.132	0.390	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2143300100

## 6. Human Gastrin

Query= sp|P01350|GAST\_HUMAN Gastrin OS=Homo sapiens GN=GAST PE=1 SV=1

Length=101

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.136	0.449	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2146606900

## 7. Human Natriuretic peptides A

Query= sp|P01160|ANF\_HUMAN Natriuretic peptides A OS=Homo sapiens GN=NPPA PE=1 SV=1

Length=153

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.133	0.409	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 4194386868

## 8. Human Cholecystokinin

Query= sp|P01178|NEU1\_HUMAN Oxytocin-neurophysin 1 OS=Homo sapiens GN=OXT  
PE=1 SV=1

Length=125

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.322	0.141	0.497	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2140938100

## 9. Human Vasopressin-neurophysin 2-copeptin

Query= sp|P01185|NEU2\_HUMAN Vasopressin-neurophysin 2-copeptin OS=Homo  
sapiens GN=AVP PE=1 SV=2

Length=164

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.323	0.140	0.470	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 4963688488

## 10. Human Somatotropin

Query= sp|P01241|SOMA\_HUMAN Somatotropin OS=Homo sapiens GN=GH1 PE=1 SV=2

Length=217

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.135	0.398	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 9153105708

### **11. Human Calcitonin**

Query= sp|P01258|CALC\_HUMAN Calcitonin OS=Homo sapiens GN=CALCA PE=1 SV=2

Length=141

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.315	0.129	0.365	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 3253148840

### **12. Human Cholecystokinin**

Query= sp|P06307|CCKN\_HUMAN Cholecystokinin OS=Homo sapiens GN=CCK PE=1 SV=1

Length=115

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.132	0.390	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2143300100

### **13. Human Gastrin**

Query= sp|P01350|GAST\_HUMAN Gastrin OS=Homo sapiens GN=GAST PE=1 SV=1

Length=101

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.136	0.449	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2146606900

### **14. Human Natriuretic peptides A**

Query= sp|P01160|ANF\_HUMAN Natriuretic peptides A OS=Homo sapiens GN=NPPA PE=1 SV=1

Length=153

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.133	0.409	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 4194386868

### **15. Human Corticoliberin**

Query= sp|P06850|CRF\_HUMAN Corticoliberin OS=Homo sapiens GN=CRH PE=1 SV=1

Length=196

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.323	0.135	0.373	0.792	4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 7443066804

### **16. Human Cortistatin**

Query= sp|000230|CORT\_HUMAN Cortistatin OS=Homo sapiens GN=CORT PE=2 SV=1

Length=105

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda        K            H            a            alpha  
      0.318    0.130       0.428       0.792       4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 2145662100

### **17. Human Proenkephalin-A**

Query= sp|P01210|PENK\_HUMAN Proenkephalin-A OS=Homo sapiens GN=PENK PE=1 SV=1

Length=267

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda        K            H            a            alpha  
      0.315    0.134       0.399       0.792       4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 13169263800

### **18. Human Endothelin-1**

Query= sp|P05305|EDN1\_HUMAN Endothelin-1 OS=Homo sapiens GN=EDN1 PE=1 SV=1

Length=212

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.133	0.426	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 8725390488

## **19. Human Erythropoietin**

Query= sp|P01588|EPO\_HUMAN Erythropoietin OS=Homo sapiens GN=EPO PE=1 SV=1

Length=193

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.134	0.400	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 7272764900

## **20. Human Galanin peptides**

Query= sp|P22466|GALA\_HUMAN Galanin peptides OS=Homo sapiens GN=GAL PE=1 SV=3

Length=123

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.133	0.398	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2141410500



## **21. Human Appetite-regulating hormone**

Query= sp|Q9UBU3|GHRL\_HUMAN Appetite-regulating hormone OS=Homo sapiens  
GN=GHRL PE=1 SV=1

Length=117

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.316	0.131	0.400	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2142827700

## **22. Human Somatoliberin**

Query= sp|P01286|SLIB\_HUMAN Somatoliberin OS=Homo sapiens GN=GHRH PE=1  
SV=1

Length=108

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.321	0.132	0.384	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2144953500

## **23. Human Hepcidin**

Query= sp|P81172|HEPC\_HUMAN Hepcidin OS=Homo sapiens GN=HAMP PE=1 SV=2

Length=84

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.331	0.134	0.489	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2150622300

### **24. Human Choriogonadotropin subunit beta 3**

Query= sp|P0DN86|CGB3\_HUMAN Choriogonadotropin subunit beta 3 OS=Homo sapiens GN=CGB3 PE=1 SV=1

Length=165

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.324	0.140	0.471	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 5049269324

### **25. Human Chorionic somatomammotropin hormone 1**

Query= sp|P0DML2|CSH1\_HUMAN Chorionic somatomammotropin hormone 1 OS=Homo sapiens GN=CSH1 PE=1 SV=1

Length=217

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.132	0.385	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 9153105708

## **26. Human Chorionic somatomammotropin hormone 2**

Query= sp|P0DML3|CSH2\_HUMAN Chorionic somatomammotropin hormone 2 OS=Homo sapiens GN=CSH2 PE=1 SV=1

Length=217

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.132	0.383	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 9153105708

## **27. Human Lutropin subunit beta**

Query= sp|P01229|LSHB\_HUMAN Lutropin subunit beta OS=Homo sapiens GN=LHB PE=1 SV=3

Length=141

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.326	0.142	0.497	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 3253148840

## **28. Human Orexin**

Query= sp|O43612|OREX\_HUMAN Orexin OS=Homo sapiens GN=HCRT PE=1 SV=1

Length=131

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.323	0.134	0.444	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2568842280

### **29. Human Osteocalcin**

Query= sp|P02818|OSTCN\_HUMAN Osteocalcin OS=Homo sapiens GN=BGLAP PE=1 SV=2

Length=100

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.138	0.438	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2146843100

### **30. Human Pancreatic prohormone (Pancreatic polypeptide, PPY)**

Query= sp|P01298|PAHO\_HUMAN Pancreatic prohormone OS=Homo sapiens GN=PPY PE=1 SV=1

Length=95

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.316	0.133	0.411	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2148024100

### **31. Human Pancreatic prohormone**

Query= sp|P01270|PTHY\_HUMAN Parathyroid hormone OS=Homo sapiens GN=PTH  
PE=1  
SV=1

Length=115

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.315	0.129	0.356	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2143300100

### **32. Human Pituitary adenylate cyclase-activating polypeptide**

Query= sp|P18509|PACA\_HUMAN Pituitary adenylate cyclase-activating  
polypeptide OS=Homo sapiens GN=ADCYAP1 PE=1 SV=3

Length=176

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.136	0.394	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 5904425772

### **33. Human Prolactin**

Query= sp|P01236|PRL\_HUMAN Prolactin OS=Homo sapiens GN=PRL PE=1 SV=1

Length=227

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.133	0.402	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 9921897136

### **34. Human Progonadoliberin-1**

Query= sp|P01148|GON1\_HUMAN Progonadoliberin-1 OS=Homo sapiens GN=GNRH1  
PE=1 SV=1

Length=92

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.317	0.135	0.406	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2148732700

### **35. Human Prorelaxin H2**

Query= sp|P04090|REL2\_HUMAN Prorelaxin H2 OS=Homo sapiens GN=RLN2 PE=1  
SV=1

Length=185

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.322	0.133	0.395	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 6588269380

### **36. Human Relaxin-3**

Query= sp|Q8WXF3|REL3\_HUMAN Relaxin-3 OS=Homo sapiens GN=RLN3 PE=1 SV=1

Length=142

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.321	0.136	0.440	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 3338758020

### **37. Human Prorelaxin**

Query= sp|P04808|REL1\_HUMAN Prorelaxin H1 OS=Homo sapiens GN=RLN1 PE=1 SV=1

Length=185

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.132	0.390	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 6588269380

### **38. Human Renin**

Query= sp|P00797|RENI\_HUMAN Renin OS=Homo sapiens GN=REN PE=1 SV=1

Length=406

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.137	0.419	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 24702826412

### **39. Human Secretin**

Query= sp|P09683|SECR\_HUMAN Secretin OS=Homo sapiens GN=SCT PE=1 SV=2

Length=121

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.315	0.131	0.417	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2141882900

### **40. Human Somatostatin**

Query= sp|P61278|SMS\_HUMAN Somatostatin OS=Homo sapiens GN=SST PE=1 SV=1

Length=116

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.317	0.128	0.371	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2143063900

### **41. Human Thrombopoietin**



Query= sp|P40225|TPO\_HUMAN Thrombopoietin OS=Homo sapiens GN=THPO PE=1  
SV=1

Length=353

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.316	0.134	0.405	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 20260266372

## **42. Human Thyrotropin subunit beta**

Query= sp|P01222|TSHB\_HUMAN Thyrotropin subunit beta OS=Homo sapiens  
GN=TSHB PE=1 SV=2

Length=138

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.329	0.140	0.471	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 3082270608

## **43. Human Pro-thyrotropin-releasing hormone**

Query= sp|P20396|TRH\_HUMAN Pro-thyrotropin-releasing hormone OS=Homo  
sapiens GN=TRH PE=1 SV=1

Length=242

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.317	0.136	0.446	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 11204901076

#### **44. Human VIP peptides**

Query= sp|P01282|VIP\_HUMAN VIP peptides OS=Homo sapiens GN=VIP PE=1 SV=1

Length=170

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.312	0.129	0.363	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 5477173504

#### **45. Human Guanylin**

Query= sp|Q02747|GUC2A\_HUMAN Guanylin OS=Homo sapiens GN=GUCA2A PE=1 SV=2

Length=115

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.316	0.137	0.420	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2143300100

#### **46. Human Guanylate cyclase activator 2B**

Query= sp|Q16661|GUC2B\_HUMAN Guanylate cyclase activator 2B OS=Homo sapiens  
GN=GUCA2B PE=1 SV=1

Length=112

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.321	0.130	0.409	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2144008700

#### **47. Human Retinol-binding protein 4**

Query= sp|P02753|RET4\_HUMAN Retinol-binding protein 4 OS=Homo sapiens  
GN=RBP4 PE=1 SV=3

Length=201

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.321	0.136	0.434	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 7870829264

#### **48. Human Neutrophil gelatinase-associated lipocalin**

Query= sp|P80188|NGAL\_HUMAN Neutrophil gelatinase-associated lipocalin  
OS=Homo sapiens GN=LCN2 PE=1 SV=2

Length=198

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
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0.319 0.137 0.413 0.792 4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 7614171788

#### **49. Human Interleukin-18**

Query= sp|Q14116|IL18\_HUMAN Interleukin-18 OS=Homo sapiens GN=IL18 PE=1 SV=1

Length=193

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.319	0.136	0.389	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 7272764900

#### **50. Human Gastric inhibitory polypeptide**

Query= sp|P09681|GIP\_HUMAN Gastric inhibitory polypeptide OS=Homo sapiens GN=GIP PE=1 SV=1

Length=153

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.312	0.125	0.366	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 4194386868

## **PART B**

### **1. Agouti-related protein | 21-82**

Query= sp|000253|21-82

Length=62

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.318	0.140	0.411	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2155818700

### **2. Natriuretic peptides A|124-151**

Query= sp|P01160|124-151

Length=28

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.328	0.142	0.454	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163849500

### **3. Natriuretic peptides A|26-123**

Query= sp|P01160|26-123

Length=98

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.308	0.131	0.399	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2147315500

#### 4. Calcitonin|85-116

Query= sp|P01258|85-116

Length=32

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.324	0.138	0.462	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2162904700

#### 5. Calcitonin|121-141

Query= sp|P01258|121-141

Length=21

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.310	0.122	0.360	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1818228804

## 6. Choriogonadotropin subunit beta 3|21-165

Query= sp|P0DN86|21-165

Length=145

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.324	0.141	0.473	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 3595585560

## 7. Choriogonadotropin subunit beta 3|21-115

Query= sp|P06307|21-115

Length=95

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.315	0.131	0.386	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2148024100

## 8. Choriogonadotropin subunit beta 3|46-103

Query= sp|P06307|46-103

Length=58

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.132	0.393	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2156763500

### **9. Choriogonadotropin subunit beta 3|65-103**

Query= sp|P06307|65-103

Length=39

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.322	0.135	0.418	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161251300

### **10. Choriogonadotropin subunit beta 3|71-103**

Query= sp|P06307|71-103

Length=33

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.320	0.135	0.427	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2162668500

### **11. Choriogonadotropin subunit beta 3|92-103**



Query= sp|P06307|92-103

Length=12

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.331	0.147	0.554	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1038987888

### **12. Choriogonadotropin subunit beta 3|79-103**

Query= sp|P06307|79-103

Length=25

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.325	0.141	0.464	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2164558100

### **13. Choriogonadotropin subunit beta 3|86-103**

Query= sp|P06307|86-103

Length=18

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.327	0.144	0.520	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1558481832

#### **14. Complement C3|86-103**

Query= sp|P01024|23-1663

Length=1641

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.317	0.134	0.389	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 129069660384

#### **15. Pro-opiomelanocortin|27-102|NPP**

Query= sp|P01189|27-102

Length=76

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.319	0.135	0.455	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2152511900

#### **16. Pro-opiomelanocortin |77-87|Melanotropin gamma1**

Query= sp|P01189|77-87

Length=11

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.345	0.156	0.678	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 952405564

### **17. Pro-opiomelanocortin |138-150 |Melanocyte-stimulating hormone alpha**

Query= sp|P01189|138-150

Length=13

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.323	0.135	0.502	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1125570212

### **18. Pro-opiomelanocortin |156-176 | Corticotropin-like intermediary peptide**

Query= sp|P01189|156-176

Length=21

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.309	0.133	0.389	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1818228804

### **19. Pro-opiomelanocortin |179-267 |Lipotropin**

Query= sp|P01189|179-267

Length=89

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.133	0.389	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2149441300

### **20. Pro-opiomelanocortin |179-234 |Lipotropin gamma**

Query= sp|P01189|179-234

Length=56

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.314	0.135	0.415	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2157235900

### **21. Pro-opiomelanocortin |217-234 |Melanocyte-stimulating hormone beta**

Query= sp|P01189|217-234

Length=18

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.317	0.145	0.530	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1558481832

## **22. Pro-opiomelanocortin |237-267 |Beta-endorphinA**

Query= sp|P01189|237-267

Length=31

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.312	0.130	0.359	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163140900

## **23. Pro-opiomelanocortin |138-176|Corticotropin**

Query= sp|P01189|138-176

Length=39

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.315	0.131	0.428	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161251300

## **24. Pro-opiomelanocortin |105-134|Potential peptide**

Query= sp|P01189|105-134

Length=30

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.302	0.139	0.436	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163377100

### **25. Cortistatin|77-105**

Query= sp|O00230|77-105

Length=29

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.324	0.132	0.468	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163613300

### **26. Cortistatin|89-105**

Query= sp|O00230|89-105

Length=17

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.336	0.139	0.574	0.792	4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 1471899508

### **27. Chorionic somatomammotropin hormone 2|27-217**

Query= sp|P0DML3|27-217

Length=191

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda        K            H            a            alpha  
      0.320    0.134       0.393       0.792       4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 7101641020

### **28. Corticoliberin|154-194**

Query= sp|P06850|154-194

Length=41

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda        K            H            a            alpha  
      0.318    0.131       0.342       0.792       4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140       1.90        42.6        43.6

Effective search space used: 2160778900

### **29. Chorionic somatomammotropin hormone 1|27-217**

Query= sp|P0DML2|27-217

Length=191

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.134	0.393	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 7101641020

### **30. Erythropoietin|27-217**

Query= sp|P01588|28-193

Length=166

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.134	0.397	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 5134850160

### **31. Gastrin|22-92**

Query= sp|P01350|22-92

Length=71

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.311	0.134	0.454	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
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0.267 0.0410 0.140 1.90 42.6 43.6

Effective search space used: 2153692900

### **32. Gastrin|41-92**

Query= sp|P01350|41-92

Length=52

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.313	0.137	0.468	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2158180700

### **33. Gastrin|59-92**

Query= sp|P01350|59-92

Length=34

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.311	0.138	0.468	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2162432300

### **34. Gastrin|76-92**

Query= sp|P01350|76-92

Length=17

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.312	0.139	0.506	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1471899508

### **35. Gastrin79-92**

Query= sp|P01350|79-92

Length=14

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.314	0.137	0.511	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1212152536

### **36. Galanin peptides33-62**

Query= sp|P22466|33-62

Length=30

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.313	0.133	0.427	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163377100

### **37. Galanin peptides|65-123**

Query= sp|P22466|65-123

Length=59

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.315	0.135	0.371	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2156527300

### **38. Appetite-regulating hormone|24-51**

Query= sp|Q9UBU3|24-51

Length=28

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.307	0.124	0.347	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163849500

### **39. Appetite-regulating hormone|24-50**

Query= sp|Q9UBU3|24-50

Length=27

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.305	0.123	0.343	0.792	4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140    1.90    42.6    43.6

Effective search space used: 2164085700

#### **40. Gastric inhibitory polypeptide|52-93**

Query= sp|P09681|52-93

Length=42

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda        K            H            a            alpha  
      0.318    0.132    0.420    0.792    4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140    1.90    42.6    43.6

Effective search space used: 2160542700

#### **41. Glucagon|21-89|Glicentin**

Query= sp|P01275|21-89

Length=69

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda        K            H            a            alpha  
      0.309    0.121    0.340    0.792    4.96

Gapped  
Lambda        K            H            a            alpha        sigma  
      0.267    0.0410    0.140    1.90    42.6    43.6

Effective search space used: 2154165300

#### **42. Glucagon|21-50|Glicentin-related polypeptideBy**

Query= sp|P01275|21-50

Length=30

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.297	0.114	0.293	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163377100

### **43. Glucagon|53-89|Oxyntomodulin**

Query= sp|P01275|53-89

Length=37

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.126	0.380	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161723700

### **44. Glucagon|53-81|Glucagon**

Query= sp|P01275|53-81

Length=29

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.127	0.394	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163613300

#### **45. Glucagon|92-128|Glucagon-like peptide 1**

Query= sp|P01275|92-128

Length=37

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.316	0.132	0.397	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161723700

#### **46. Glucagon|98-128|Glucagon-like peptide 1**

Query= sp|P01275|98-128

Length=31

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.314	0.130	0.388	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163140900

#### **47. Glucagon|98-127|Glucagon-like peptide 1**

Query= sp|P01275|98-127

Length=30

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.315	0.129	0.381	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163377100

#### **48. Glucagon|146-178|Glucagon-like peptide 2**

Query= sp|P01275|146-178

Length=33

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.320	0.134	0.401	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2162668500

#### **49. Progonadoliberein-1|24-92**

Query= sp|P01148|24-92

Length=69

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.313	0.133	0.386	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2154165300

#### **50. Progonadoliberein-1|37-92**

Query= sp|P01148|37-92

Length=56

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.311	0.130	0.349	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2157235900

### **51. Lutropin subunit beta|37-92**

Query= sp|P01229|21-141

Length=121

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.327	0.144	0.505	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2141882900

### **52. Vasopressin-neurophysin 2-copeptin|32-124**

Query= sp|P01185|32-124

Length=93

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.324	0.141	0.497	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6



Effective search space used: 2148496500

### **53. Vasopressin-neurophysin 2-copeptin|126-164**

Query= sp|P01185|126-164

Length=39

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.312	0.132	0.379	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161251300

### **54. Neutrophil gelatinase-associated lipocalin|21-198**

Query= sp|P80188|21-198

Length=178

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.137	0.415	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 6075568548

### **55. Oxytocin-neurophysin 1|32-125**

Query= sp|P01178|32-125

Length=94

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.323	0.141	0.501	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2148260300

### **56. Prolactin|29-227**

Query= sp|P01236|29-227

Length=199

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.319	0.133	0.397	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 7699724280

### **57. Parathyroid hormone|32-115**

Query= sp|P01270|32-115

Length=84

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.311	0.127	0.350	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2150622300

### **58. Secretin|32-115**

Query= sp|P09683|28-54

Length=27

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.136	0.368	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2164085700

### **59. Somatoliberin|32-75**

Query= sp|P01286|32-75

Length=44

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.130	0.340	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2160070300

### **60. Somatostatin|89-116**

Query= sp|P61278|89-116

Length=28

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.125	0.434	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163849500

### **61. Somatostatin|103-116**

Query= sp|P61278|103-116

Length=14

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.334	0.138	0.589	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1212152536

### **62. Somatostatin|21-302**

Query= sp|P61812|21-302

Length=282

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.319	0.134	0.391	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 14451984300

### **63. Transforming growth factor beta-1|30-278**

Query= sp|P01137|30-278

Length=249

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.319	0.134	0.397	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 11716808276

#### **64. Pro-thyrotropin-releasing hormone|25-242**

Query= sp|P20396|25-242

Length=218

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.317	0.134	0.432	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 9238648752

#### **65. Thrombopoietin|22-353**

Query= sp|P40225|22-353

Length=332

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.316	0.134	0.407	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 18552589468

### **66. Guanylin|22-115**

Query= sp|Q02747|22-115

Length=94

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.316	0.137	0.422	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2148260300

### **67. Guanylin|101-115**

Query= sp|Q02747|101-115

Length=15

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.329	0.141	0.574	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1298734860

### **68. Guanylate cyclase activator 2B|89-112**

Query= sp|Q16661|89-112

Length=24

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
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0.331 0.141 0.488 0.792 4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2077975776

### **69. Guanylate cyclase activator 2B|97-112**

Query= sp|Q16661|97-112

Length=16

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.328	0.142	0.542	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1385317184

### **70. Heparin|60-84**

Query= sp|P81172|60-84

Length=25

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.343	0.151	0.702	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2164558100

### **71. Heparin|65-84**

Query= sp|P81172|65-84

Length=20

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.346	0.151	0.740	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1731646480

### **72. Islet amyloid polypeptide34-70**

Query= sp|P10997|34-70

Length=37

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.315	0.121	0.355	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161723700

### **73. Insulin (A chain)25-54**

Query= sp|P01308|90-110

Length=21

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.326	0.138	0.482	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6



Effective search space used: 1818228804

#### **74. Leptin|22-167**

Query= sp|P41159|22-167

Length=146

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.317	0.132	0.377	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 3681194740

#### **75. Orexin|34-66**

Query= sp|O43612|34-66

Length=33

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.327	0.141	0.492	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2162668500

#### **76. Orexin|70-97**

Query= sp|O43612|70-97

Length=28

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.314	0.121	0.330	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163849500

### **77. Osteocalcin|52-100**

Query= sp|P02818|52-100

Length=49

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.323	0.149	0.518	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2158889300

### **78. Pituitary adenylate cyclase-activating polypeptide|82-129**

Query= sp|P18509|82-129

Length=48

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.312	0.132	0.367	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2159125500

### **79. Pituitary adenylate cyclase-activating polypeptide|132-169**

Query= sp|P18509|132-169

Length=38

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.320	0.131	0.365	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2161487500

### **80. Pituitary adenylate cyclase-activating polypeptide|132-158**

Query= sp|P18509|132-158

Length=27

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.323	0.132	0.369	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2164085700

### **81. Pancreatic prohormone|30-65**

Query= sp|P01298|30-65

Length=36

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.318	0.135	0.411	0.792	4.96

Gapped  
Lambda      K            H            a            alpha      sigma  
    0.267    0.0410    0.140      1.90      42.6      43.6

Effective search space used: 2161959900

### **82. Pancreatic prohormone|69-88**

Query= sp|P01298|69-88

Length=20

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda      K            H            a            alpha  
    0.314    0.127      0.427      0.792      4.96

Gapped  
Lambda      K            H            a            alpha      sigma  
    0.267    0.0410    0.140      1.90      42.6      43.6

Effective search space used: 1731646480

### **83. Proenkephalin-A|25-97**

Query= sp|P01210|25-97

Length=73

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda      K            H            a            alpha  
    0.316    0.131      0.408      0.792      4.96

Gapped  
Lambda      K            H            a            alpha      sigma  
    0.267    0.0410    0.140      1.90      42.6      43.6

Effective search space used: 2153220500

### **84. Proenkephalin-A|114-133**

Query= sp|P01210|114-133

Length=20

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.300	0.126	0.337	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1731646480

### **85. Prorelaxin H2|25-53**

Query= sp|P04090|25-53

Length=29

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.324	0.132	0.452	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163613300

### **86. Prorelaxin H2|162-185**

Query= sp|P04090|162-185

Length=24

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.334	0.135	0.486	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2077975776

### **87. Prorelaxin H1|23-53**

Query= sp|P04808|23-53

Length=31

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.326	0.133	0.454	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163140900

### **88. Prorelaxin H1|163-185**

Query= sp|P04808|163-185

Length=23

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.334	0.145	0.527	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 1991393452

### **89. Relaxin-3|26-52**

Query= sp|Q8WXF3|26-52

Length=27

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.335	0.149	0.543	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2164085700

### **90. Relaxin-3|119-142**

Query= sp|Q8WXF3|119-142

Length=24

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.321	0.140	0.393	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2077975776

### **91. Retinol-binding protein 4|19-201**

Query= sp|P02753|19-201

Length=183

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.321	0.136	0.426	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 6503425488

### **92. Renin|67-406**

Query= sp|P00797|67-406

Length=340

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.319	0.136	0.406	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 19236555900

### **93. Thyrotropin subunit beta|21-132**

Query= sp|P01222|21-132

Length=112

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.327	0.141	0.484	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2144008700

### **94. VIP peptides|81-122**

Query= sp|P01282|81-122

Length=42

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.312	0.130	0.352	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6



Effective search space used: 2160542700

### **95. VIP peptides|81-107**

Query= sp|P01282|81-107

Length=27

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.317	0.132	0.356	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2164085700

### **96. VIP peptides|125-152**

Query= sp|P01282|125-152

Length=28

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.320	0.130	0.357	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 2163849500

### **97. Oxytocin |125-152**

Query= sp|P01178|NEU1\_HUMAN Oxytocin OS=Homo sapiens GN=OXT PE=1 SV=1

Length=9

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.332	0.155	0.631	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 779240916

### **98. Vasopressin-neurophysin 2-copeptin|20-28**

Query= >sp|P01185|NEU2\_HUMAN Arg-vasopressin 20 - 28, OS=Homo sapiens  
GN=AVP PE=1 SV=2

Length=9

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.336	0.155	0.673	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 779240916

### **99. Proenkephalin-A|20-28**

Query= sp|P01210|100-104 Met-enkephalin

Length=5

**\*\*\*\*\* No hits found \*\*\*\*\***

Lambda	K	H	a	alpha
0.338	0.168	0.609	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 432911620

### **100. Proenkephalin-A|107-111**

Query= sp|P01210|107-111 Met-enkephalin

Length=5

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.338	0.168	0.609	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

Effective search space used: 432911620

**101. Gonadoliberin-11|24-33**

Query= sp|P01148|24-33 Gonadoliberin-11

Length=10

\*\*\*\*\* No hits found \*\*\*\*\*

Lambda	K	H	a	alpha
0.321	0.145	0.584	0.792	4.96

Gapped

Lambda	K	H	a	alpha	sigma
0.267	0.0410	0.140	1.90	42.6	43.6

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Database: Refseq viruses representative genomes

Posted date: Sep 18, 2017 10:25 PM

Number of letters in database: 259,746,973

Number of sequences in database: 9,448

Matrix: BLOSUM62

Gap Penalties: Existence: 11, Extension: 1

Neighboring words threshold: 13

Window for multiple hits: 40

TBLASTN 2.6.0+

Reference: Stephen F. Altschul, Thomas L. Madden, Alejandro A.

Schaffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", *Nucleic Acids Res.* 25:3389-3402.

Database: Refseq viruses representative genomes  
9,448 sequences; 259,746,973 total letters