6.1. High confidence neuropeptide cDNA sequences with aligned protein sequence

For brevity, most of the untranslated regions are not presented here. Any untranslated regions that are shown are shown in grey. Regions are presented as follows; protein-coding shown in black, signal peptide regions (if present) are blue and bold, basic cleavage sites are bold and underlined, and the neuropeptide region is red and bold.

Fh-NPP-1
XLOC_035311
L/M/Iamide

```
caacgtcatacgtaagaaaagatgttcggccattcaaaattactgatcgtcacgacctgc
 Q  R  H  T  -  E  K  M  F  G  H  S  K  L  L  I  V  T  T  C
gtgctactgatggtctcgtcagctgtgatctcctctgtcagcgcattgggagatgcggaa
 V  L  L  M  V  S  S  A  V  I  S  S  V  S  A  L  G  D  A  E
gatccaatttttatgaccctatcggaaaaggaatgccctctcaagcctgggacggtaca
 D  P  I  F  Y  D  P  I  G  K  G  M  P  S  Q  A  W  D  G  T
gacgattcggattatcagacccccgtgatctacaagaggaatttattcgtattggaaaa
 D  D  S  D  Y  Q  T  P  V  I  Y  K  R  N  F  I  R  I  G  K
cgcaacaccatcccagttgaaaaacggaactttattcgcatcggtcgttagaccacgtga
 R  N  T  I  P  V  E  K  R  N  F  I  R  I  G  R  -
```

Fh-NPP-2
BN1106_s4889B000043
L/M/Iamide

```
aaaacaatccaaacagttggtcagctttgaaattatcactttgcaatgcaatccatctcg
 K  T  I  Q  T  V  G  Q  L  -  N  Y  H  F  A  M  Q  S  I  S
cttgcaatccagctgattgtgtccctctatatcgtcagtttcacttacgctgtcagtaat
 L  A  I  Q  L  I  V  S  L  Y  I  V  S  F  T  Y  A  V  S  N
ggagagttggatatctgtgatacagagatgtgtggacaatgttcaatgtttggtgtggac
 G  E  L  D  I  C  D  T  E  M  C  G  Q  C  S  M  F  G  V  D
atgattgactgttgcaatgaccccaaaatggctcagatctgtgcccgatgcgtggtccat
 M  I  D  C  C  N  D  P  K  M  A  Q  I  C  A  R  C  V  V  H
tcgcagcctgaagatgcattccgctgccttttacctcttcacatctactcaacaaacgc
 S  Q  P  E  D  A  F  R  C  L  F  T  S  S  H  L  L  N  K  R
cgaggaatgatcggcaaacgacgtggattgatcgggaaatgagcaagtgacaacacaatt
 R  G  M  I  G  K  R  R  G  L  I  G  K  -  A  S  D  N  T  I
```

Fh-NPP-5

BN1106_s3602B000040

PWamide

```
tgggaccagagaccagaaacttcatcaaaaatgaagctgcccaaactgtccgttctttta
 W  D  Q  R  P  E  T  S  S  K  M  K  L  P  K  L  S  V  L  L
tgcgccttcacgttatcgttggccttcctggagaactcagctgaaggacgggtggtggag
 C  A  F  T  L  S  L  A  F  L  E  N  S  A  E  G  R  V  V  E
cgagatccatttgaaagactaaccacggatttcgatgctccatggattcgaagatatata
 R  D  P  F  E  R  L  T  T  D  F  D  A  P  W  I  R  R  Y  I
gcatacagccatcaaggcaaggaacgaaaatctggttcatacgatccatggtttccagtc
 A  Y  S  H  Q  G  K  E  R  K  S  G  S  Y  D  P  W  F  P  V
aaacgagaagcatatgcggatatgccttggggacgaaaacgctaggcttgacgctgcgcg
 K  R  E  A  Y  A  D  M  P  W  G  R  K  R  -  A  -  R  C  A
```

Fh-NPP-6.1

BN1106_s597B000531

L/M/Iamide (Myomodulin)

```
tattcacccagaatgaggtttgccttgcggtccatgacaactgtaatcatgttcgctgta
 Y  S  P  R  M  R  F  A  L  R  S  M  T  T  V  I  M  F  A  V
attttgctccagtgttcacagtgtactgttcaggcaagaagtctaacgcggccggaagaa
 I  L  L  Q  C  S  Q  C  T  V  Q  A  R  S  L  T  R  P  E  E
gccctcaattcaattgtttatgaccagttgagatacccggacctggacgaattggaagaa
 A  L  N  S  I  V  Y  D  Q  L  R  Y  P  D  L  D  E  L  E  E
gtctaccgagccgcaaatgctggacccatcaaacgagccgttcgtctcatgagactcggt
 V  Y  R  A  A  N  A  G  P  I  K  R  A  V  R  L  M  R  L  G
tgacctagttcgaccggagcaggaacagccattgtaagatgtacacaaaccctg
 -  P  S  S  T  G  A  G  T  A  I  V  R  C  T  Q  T  L
```

Fh-NPP-6.2

BN1106_s328B000221

L/M/Iamide (Myomodulin)

```
taagccatctgttactgagaacagcaatcctgaaccaaaatgttcggtggcattatcatt
 -  A  I  C  Y  -  E  Q  Q  S  -  T  K  M  F  G  G  I  I  I
gcgtttttcttggggattgtgctgaccagtggatcaccgactccaagcaaacgtcaatgg
 A  F  F  L  G  I  V  L  T  S  G  S  P  T  P  S  K  R  Q  W
attcaatctgttatagaaaaatgtgaaaataagtatccgaattgtcagttcaatcaaaat
 I  Q  S  V  I  E  K  C  E  N  K  Y  P  N  C  Q  F  N  Q  N
attgctgaaattcggaaacacccgcaagtggctgaattcattcatgacggagcgaaagat
 I  A  E  I  R  K  H  P  Q  V  A  E  F  I  H  D  G  A  K  D
ttcaattcattttgcaagttaatcttgaaacaatgtggaactgcggaagatgcacagcgc
 F  N  S  F  C  K  L  I  L  K  Q  C  G  T  A  E  D  A  Q  R
gtagacaaacggtatatgcgtatgcttcgattgggttaatcatgcataataatgcgtgct
 V  D  K  R  Y  M  R  M  L  R  L  G  -  S  C  I  I  M  R  A
```

Fh-NPP-13
BN1106_s56B000208
FMRFamide

```
tcgggggattcactgacatatacaatgaaccaagtcgtccgaactgtgttcttcggaacc
 S  G  D  S  L  T  Y  T  M  N  Q  V  V  R  T  V  F  F  G  T
cttctcgtcatcctgtgcaatacttatgttttggcacactggttccctgatttcgatggg
 L  L  V  I  L  C  N  T  Y  V  L  A  H  W  F  P  D  F  D  G
aaaagatattcttcttacaaagatgagaacagagatgtacgagttgtaccgcgaaacttt
 K  R  Y  S  S  Y  K  D  E  N  R  D  V  R  V  V  P  R  N  F
ttcccacaacgatttgggaaaagagcgcaatatgattcaggctacaaaccacaggacatg
 F  P  Q  R  F  G  K  R  A  Q  Y  D  S  G  Y  K  P  Q  D  M
atcatccgatggctttgaacagagttaaagtgttactatttggatcaacgcggaacactt
 I  I  R  W  L  -  T  E  L  K  C  Y  Y  L  D  Q  R  G  T  L
```

Fh-NPP-14
BN1106_s928B000210
L/M/Iamide

```
acgagcacaatgcaaggtcaacgttatacgattctgttccttttgtgcttggtattcagt
 T  S  T  M  Q  G  Q  R  Y  T  I  L  F  L  L  C  L  V  F  S
atggtgtctctcaagccgactgaatcgatggacttaacgaacttcatggtacctctggag
 M  V  S  L  K  P  T  E  S  M  D  L  T  N  F  M  V  P  L  E
gacgagaactatccccaagagtacgaacccgtattgttctttcgaaaacgtggcctacga
 D  E  N  Y  P  Q  E  Y  E  P  V  L  F  F  R  K  R  G  L  R
caaatgcgcatgggcaagcgatttccgcatgaagttgccccacagctgcctggaagagag
 Q  M  R  M  G  K  R  F  P  H  E  V  A  P  Q  L  P  G  R  E
cgaccgttttaaaatgctccaaccaaagaatgatctgagcccatttggctcacaatcttg
 R  P  F  -  N  A  P  T  K  E  -  S  E  P  I  W  L  T  I  L
```

Fh-NPP-15
BN1106_s3135B000180
FMRFamide

```
catccaatataagtcgggtgatgtagacccaatgcggttcaaagcgatcgggcaacaatg
 H  P  I  -  V  G  -  C  R  P  N  A  V  Q  S  D  R  A  T  M
aacgggtttgcacttgttaggatgatcctcgccggcagcttactcatgttactctgtgca
 N  G  F  A  L  V  R  M  I  L  A  G  S  L  L  M  L  L  C  A
acagtgatagccattcccaatccaactggctatgaaactgagttggattactatcccgaa
 T  V  I  A  I  P  N  P  T  G  Y  E  T  E  L  D  Y  Y  P  E
ttggcctacgaaccgattgtatacgataaccgaggacatttgccacagtttggcaaacaa
 L  A  Y  E  P  I  V  Y  D  N  R  G  H  L  P  Q  F  G  K  Q
cttccgcgtgcggcgttcgtgaaaaggggacaatttctccgcctcggttaaagtgacggc
 L  P  R  A  A  F  V  K  R  G  Q  F  L  R  L  G  -  S  D  G
```

Fh-NPP-20.1 (/Fh-NPF-1)
BN1106_s5763B000010
Neuropeptide F/Y

```
tcttgtctttccatgttactcagtcccttccagtcacatcaaaagatgaaagtagcgaga
 S  C  L  S  M  L  L  S  P  F  Q  S  H  Q  K  M  K  V  A  R
tttgctattacgtttcaactcgctgttatgttttattgttatctttcgtgatatcatta
 F  A  I  T  F  Q  L  A  V  M  F  L  L  L  S  F  V  I  S  L
acaaatgcccaagaccaggaagaagatcccagtttggacaatctgggagcaaaactgcgt
 T  N  A  Q  D  Q  E  E  D  P  S  L  D  N  L  G  A  K  L  R
gaaatatacaaagtagtacgaaacaatcgaatgcaagaactgagcaactactttcaactt
 E  I  Y  K  V  V  R  N  N  R  M  Q  E  L  S  N  Y  F  Q  L
catggcagaccaagattcggcaaacgaagatttgtggtgccgtatgggtatccatctgac
 H  G  R  P  R  F  G  K  R  R  F  V  V  P  Y  G  Y  P  S  D
gaagacatacgtgagccaatctatcgcgggatttgaacgctaatattgaaagtaaaatag
 E  D  I  R  E  P  I  Y  R  G  I  -  T  L  I  L  K  V  K  -
```

Fh-NPP-20.2 (/Fh-NPF-2)
BN1106_s280B000160
Neuropeptide F/Y

```
acaaagggacaaatattggtcatgttgacaaaaaagtcaccacaatccaactctgttcgg
 T  K  G  Q  I  L  V  M  L  T  K  K  S  P  Q  S  N  S  V  R
gcaaacgtcactctggacacgcccatgtatgctggccgtcgggtatgtgtgatgagtatt
 A  N  V  T  L  D  T  P  M  Y  A  G  R  R  V  C  V  M  S  I
cgcaaacttactgtggtgtggtggatctatctgatactgttcgcttgtcaagattcctcg
 R  K  L  T  V  V  W  W  I  Y  L  I  L  F  A  C  Q  D  S  S
ttatcaaatcacacatccgacttgacgcaactgaacctcacggaaaattgtaaaccacga
 L  S  N  H  T  S  D  L  T  Q  L  N  L  T  E  N  C  K  P  R
agtttcaagtcatatgcatctgatttgaggcggatacaacatttctccctgctcacgttc
 S  F  K  S  Y  A  S  D  L  R  R  I  Q  H  F  S  L  L  T  F
ttacccgttgcggaagctgttcctgttccttcggggatacccgtattcgaaacagatcgg
 L  P  V  A  E  A  V  P  V  P  S  G  I  P  V  F  E  T  D  R
gaactgctggcttacgtaagggctttaaatgtatattttcaagtgtttggccgatccagg
 E  L  L  A  Y  V  R  A  L  N  V  Y  F  Q  V  F  G  R  S  R
tttggatgaatgtgcgcattgcatgaaaatctgactttctatctgccgaaatgaccccaa
 F  G  -  M  C  A  L  H  E  N  L  T  F  Y  L  P  K  -  P  Q
```

Fh-NPP-20.3 (/Fh-NPF-3)
BN1106_s6263B000112
Neuropeptide F/Y

```
accatgcacgcaatcaaaaccatcgtgttgcaagtcaccctactatgtctgattatatca
 T  M  H  A  I  K  T  I  V  L  Q  V  T  L  L  C  L  I  I  S
gaggaacctcaacaagctcaagcatatccctcaaacggatacggtgaaggaatttatcca
 E  E  P  Q  Q  A  Q  A  Y  P  S  N  G  Y  G  E  G  I  Y  P
aagcaggtggaagaagttctcgctacccagccatatgattttcaaaatgctattcgggaa
 K  Q  V  E  E  V  L  A  T  Q  P  Y  D  F  Q  N  A  I  R  E
taccagaacgtcggtggagtgagtcaagctccgagaataccgaagatatttcaaagtcca
 Y  Q  N  V  G  G  V  S  Q  A  P  R  I  P  K  I  F  Q  S  P
gaagctctgaggacatacttgaataagctcaatgagtattttatcacaatcggacgacca
 E  A  L  R  T  Y  L  N  K  L  N  E  Y  F  I  T  I  G  R  P
aggttcggataagaatggactaagcccgcttgccaggcccaccatttactctgtccgacc
 R  F  G  -  E  W  T  K  P  A  C  Q  A  H  H  L  L  C  P  T
```

Fh-NPP-20.4 (/Fh-NPY-1)
BN1106_s2467B000076
Neuropeptide F/Y

```
tagtttcatgaacggacactcctctagcaagtgacgtgttcgtcgatggagaccttgaat
 -  F  H  E  R  T  L  L  -  Q  V  T  C  S  S  M  E  T  L  N
agtgaatacactttcgtctacccgcaggaacattcacgtcacttgtccaacaacgatcac
 S  E  Y  T  F  V  Y  P  Q  E  H  S  R  H  L  S  N  N  D  H
actgcaacaattctatctacatcatcaaagacaaaatctactaaaatgtccagatctttg
 T  A  T  I  L  S  T  S  S  K  T  K  S  T  K  M  S  R  S  L
acttgggcacatgtcagttatattctactattattgctcatatgcaacactacattccaa
 T  W  A  H  V  S  Y  I  L  L  L  L  L  I  C  N  T  T  F  Q
tggctcgagacgggcatgagcgttgccggcatgcatgtgccatctattgcgagccgggtc
 W  L  E  T  G  M  S  V  A  G  M  H  V  P  S  I  A  S  R  V
gaaattgggcaaatgcgactgcgtccttactggaccccattgccacgtttgaccgcggaa
 E  I  G  Q  M  R  L  R  P  Y  W  T  P  L  P  R  L  T  A  E
gatgcaaacgaccaaataatggttagccgacgaagcctatctcaccgttcacgtaatcga
 D  A  N  D  Q  I  M  V  S  R  R  S  L  S  H  R  S  R  N  R
atagcaaataacgatcactacggcattgacgaggtagaggaggaaccaaatataaacggt
 I  A  N  N  D  H  Y  G  I  D  E  V  E  E  E  P  N  I  N  G
gacagtttgaagaagaccatagaacgtcaagccactgctttgtttgacgatgagaatgcg
 D  S  L  K  K  T  I  E  R  Q  A  T  A  L  F  D  D  E  N  A
ctgtccagaatgattcagcaaatggacgcctattatctaacatacggaagaccaagatac
 L  S  R  M  I  Q  Q  M  D  A  Y  Y  L  T  Y  G  R  P  R  Y
ggttaacaatgcgcgaattccgccactgttattaccttggtgctcgcagccggccgaatc
 G  -  Q  C  A  N  S  A  T  V  I  T  L  V  L  A  A  G  R  I
```

Fh-NPP-20.5 (/Fh-NPY-2)
XLOC_069441
Neuropeptide F/Y

```
gaagtcctacttgattcgggagcaatgcactttactggtctgatcagccggacactgatc
 E  V  L  L  D  S  G  A  M  H  F  T  G  L  I  S  R  T  L  I
gtctgtctattcttcgtctgcatggggcgcatttcaaatgctctgtctatgggttcgctg
 V  C  L  F  F  V  C  M  G  R  I  S  N  A  L  S  M  G  S  L
agcacggaggatgttgagaaattgcggatggtaatgatgaattcaccggagaatttgcgt
 S  T  E  D  V  E  K  L  R  M  V  M  M  N  S  P  E  N  L  R
gcctatttgcggttgttacgtgaatgggatatgctctcgtccataccgcggtatggctga
 A  Y  L  R  L  L  R  E  W  D  M  L  S  S  I  P  R  Y  G  -
```

Fh-NPP-23
BN1106_s566B000338
FMRFamide (YIRFamide)

```
tatttcacggtggagtaaaaaatgttttgcgcaacagttctactcctagttttggcaaca
 Y  F  T  V  E  -  K  M  F  C  A  T  V  L  L  L  V  L  A  T
atgactgcatctgagaaaacaggggacacgtatccggaaccccgggacgttttcactacg
 M  T  A  S  E  K  T  G  D  T  Y  P  E  P  R  D  V  F  T  T
aacgaagagatcggctacatcacacctcttgtaaagcgttacatccgatttggcaaacgg
 N  E  E  I  G  Y  I  T  P  L  V  K  R  Y  I  R  F  G  K  R
ggaactccacaatctaacgatcagagacaatacagagaagatattcaaattccaggacaa
 G  T  P  Q  S  N  D  Q  R  Q  Y  R  E  D  I  Q  I  P  G  Q
ccgttgggattcattcggtttggttaatcgatctgggtgtttattgactaattaaatcta
 P  L  G  F  I  R  F  G  -  S  I  W  V  F  I  D  -  L  N  L
```

Fh-NPP-24
XLOC_015440
Uncharacterised amidated

```
agaagcacatcgatgacgcgattcggttcaaacgttttgagattttgccactggaccatt
 R  S  T  S  M  T  R  F  G  S  N  V  L  R  F  C  H  W  T  I
tttgtctatctaatatcaaactgtgtgttcagcgaagccaatgtcatacatcgtttgaca
 F  V  Y  L  I  S  N  C  V  F  S  E  A  N  V  I  H  R  L  T
ccggataatgactattctctgagtgattacgaactgatcaatccgaagatattttcgaaa
 P  D  N  D  Y  S  L  S  D  Y  E  L  I  N  P  K  I  F  S  K
aggggaggaatgtacggtggtctgttgggtaaacgaggattcaattatgttccgaaacca
 R  G  G  M  Y  G  G  L  L  G  K  R  G  F  N  Y  V  P  K  P
tatgattacgcctgatgtttcacagtgaaaaaagacaatgttttccactttccttatgca
 Y  D  Y  A  -  C  F  T  V  K  K  D  N  V  F  H  F  P  Y  A
```

Fh-NPP-26
BN1106_s1559B000208
Unamidated

```
gttccatcggtgtcttatcctagtgaataaagaaatagaaccacaatgagaatgactctt
 V  P  S  V  S  Y  P  S  E  -  R  N  R  T  T  M  R  M  T  L
gcactccacatgatagtagtgttggcagtgctcacatttcatactttggctcatcaaatt
 A  L  H  M  I  V  V  L  A  V  L  T  F  H  T  L  A  H  Q  I
ccaatttatcccgttgaagtggagagacaaggtgttccgacaatccccttttggacttgg
 P  I  Y  P  V  E  V  E  R  Q  G  V  P  T  I  P  F  W  T  W
tatactgactacactccttcacggtcttcaatatactcgtcgaactcgaaacgagcacac
 Y  T  D  Y  T  P  S  R  S  S  I  Y  S  S  N  S  K  R  A  H
ttcgatccaattttgtttcgtaaacgacaatcaaccatcgatccaatcctattctgaagt
 F  D  P  I  L  F  R  K  R  Q  S  T  I  D  P  I  L  F  -  S
```

Fh-NPP-27
XLOC_044700
Unamidated

```
aaaaggcggtgtacaatcggaacaatgcgtgtgaccttgatgctagcagcttatttggtt
 K  R  R  C  T  I  G  T  M  R  V  T  L  M  L  A  A  Y  L  V
gcaatgattttctgtgaatcatctcaagctcttcccacggaagtaggatcttttgaaatt
 A  M  I  F  C  E  S  S  Q  A  L  P  T  E  V  G  S  F  E  I
gaagaagaccttccaagatggcgaccggtggaagttaacgaatgggttccgcggcttgga
 E  E  D  L  P  R  W  R  P  V  E  V  N  E  W  V  P  R  L  G
agattcaaaaggaagcctccttacattatgggaggaattcgttattgaaagtctaccgga
 R  F  K  R  K  P  P  Y  I  M  G  G  I  R  Y  -  K  S  T  G
```

Fh-NPP-28.1
BN1106_s3660B000091
Unamidated

```
tttgtcttcttccgcttggattcggcctattaaaatcgagacaaaatgcgttcattactg
 F  V  F  F  R  L  D  S  A  Y  -  N  R  D  K  M  R  S  L  L
cttgtcgtgatattcattgttttctcactggccgttgctaattcggctgaacgggatccc
 L  V  V  I  F  I  V  F  S  L  A  V  A  N  S  A  E  R  D  P
gaagactatgccaaaagagcataccatttcttccgaatccgtcgtggatcacaatgtttg
 E  D  Y  A  K  R  A  Y  H  F  F  R  I  R  R  G  S  Q  C  L
cccatactggattatgtgaaacttgcaatgaagaatcccagacaaatttgtgaagaggat
 P  I  L  D  Y  V  K  L  A  M  K  N  P  R  Q  I  C  E  E  D
cgtgccgtgttggaaagtctactctgaaaatctcaccatgactttctggattcgtccgta
 R  A  V  L  E  S  L  L  -  K  S  H  H  D  F  L  D  S  S  V
```

Fh-NPP-28.2
BN1106_s18B000411
Unamidated

atgcgatccgttgtgaccaaagtgttgctcctcttggcctgtgtggtatccatgctcatg
M R S V V T K V L L L L A C V V S M L M
gcagttagcgctgcgcaagatatggacaaaagagcatttcatttcttccgaatccgacgc
A V S A A Q D M D K R A F H F F R I R R
ggttctgaatgcataccagttttaaaactaattcgagaagctctcaaaaatccggacaga
G S E C I P V L K L I R E A L K N P D R
atctgtgaatcggacctgacagagttgacaagaacaacatactgagaattccagtgcaat
I C E S D L T E L T R T T Y - E F Q C N

Fh-NPP-29
BN1106_s2163B000316
Unamidated

cactttaaactgtatataaagagtcacttgtgaaaactttgtgacaaacgtctcgcaatg
H F K L Y I K S H L - K L C D K R L A M
ttgggtgatctgcgcattctgtcggtgttaatgatattcgtactgtttattcatggtttc
L G D L R I L S V L M I F V L F I H G F
cattgccttgtgaattcagaagactcggaagatcagttggaacatcagggcactgataaa
H C L V N S E D S E D Q L E H Q G T D K
agatacatatactggaaaagaggctcttatgatgacgattattatctaccgggttataag
R Y I Y W K R G S Y D D D Y Y L P G Y K
cgcatgatatactacaaacgaacacccaatcgaatgaaaaattcggtttactgaagctgg
R M I Y Y K R T P N R M K N S V Y - S W

Fh-NPP-31/32.1
BN1106_s2137B000117
Unamidated

aaaatatcaacttttacaagtgaatgaatcacaactttctatctgagcggatcttttg
K I S T F Y K - M N H N F L S E R I F L
atcaagaccaccgtgtctaccatgcactcatcaatgattttgttctcactctgtatggtc
I K T T V S T M H S S M I L F S L C M V
ttctgtgtcacggctgcggaaataaatagttatccggttcctaatgactacaatctcggg
F C V T A A E I N S Y P V P N D Y N L G
gtacccgctcaaatgcgatcaagatatccgagtgccagatatgctctgatgaatagactt
V P A Q M R S R Y P S A R Y A L M N R L
tggaaacgcggaccggaaactctgtgggaacttgagtgaaccctttcgatcccaccact
W K R G P E T L W E L E - T L F D P T T

Fh-NPP-31/32.2
BN1106_s199B000225
Unamidated

```
agctaattcattgggatattcgaatttgcttcatctgctttcggaacaatgaaacaattt
 S  -  F  I  G  I  F  E  F  A  S  S  A  F  G  T  M  K  Q  F
ctagcggccattctgtttctggtttgtctcacccagttgcaccttactgcgttggcacac
 L  A  A  I  L  F  L  V  C  L  T  Q  L  H  L  T  A  L  A  H
acgactggttgcaatgcggaaactgcaaaatgggctcaggattatttgagacactatcga
 T  T  G  C  N  A  E  T  A  K  W  A  Q  D  Y  L  R  H  Y  R
ttggcttgctatccatcagaacagagtgacaggcatatgttcccatcgttgaagaaacgt
 L  A  C  Y  P  S  E  Q  S  D  R  H  M  F  P  S  L  K  K  R
ggtcccgaaccattgtggaccatcgaggtttgatgccgtgggaaccacatgcttggggct
 G  P  E  P  L  W  T  I  E  V  -  C  R  G  N  H  M  L  G  A
```

Fh-NPP-35.1
BN1106_s358B000223
L/M/Iamide (Pyrokinin)

```
tcagtgaacttttgaagagcatgaatggtgtatggacgtaaaacggactttaaaagaaaa
 S  V  N  F  -  R  A  -  M  V  Y  G  R  K  T  D  F  K  R  K
gccgtcaatgaaacggattggtggagacaaacgtcaatggttcggctaggcagaagttgg
 A  V  N  E  T  D  W  W  R  Q  T  S  M  V  R  L  G  R  S  W
aagagtgtaaaatgtttttttttgtatttgatagaaaattggtaatcaaattatggttg
 K  S  V  K  C  F  F  F  V  F  D  R  K  L  V  I  K  L  W  L
gctgcagatggctggtattctgttccatgaagaccttggttgcaggtagaatgttgaggg
 A  A  D  G  W  Y  S  V  P  -  R  P  W  L  Q  V  E  C  -  G
```

Fh-NPP-35.2
BN1106_s4627B000067
L/M/Iamide (Pyrokinin)

```
atgagcattatgagtcgttcaactttattcggacaagtcctatgcacactacttcttctg
 M  S  I  M  S  R  S  T  L  F  G  Q  V  L  C  T  L  L  L  L
tcctgcttggagctacaatcggtcagagccggtctacgccgattcgatccgaacgataga
 S  C  L  E  L  Q  S  V  R  A  G  L  R  R  F  D  P  N  D  R
cgcatcttctacgtggccgccgaaccggaaaacgcagaagtggattgggattcgccagtg
 R  I  F  Y  V  A  A  E  P  E  N  A  E  V  D  W  D  S  P  V
tttttgcactcaccgtacaaacgttcgcactatatgagtcaacgtttgggcaagtaagag
 F  L  H  S  P  Y  K  R  S  H  Y  M  S  Q  R  L  G  K  -  E
```

Fh-NPP-36.1
BN1106_s937B000526
Unamidated

```
tgaacttcgcgaattactgagttttactgcaggatgaacactgtactgatctccatcttg
 -  T  S  R  I  T  E  F  Y  C  R  M  N  T  V  L  I  S  I  L
gctatatgcttgtttgcatccacttcgaatggtcggtggactagaccacgctacctccat
 A  I  C  L  F  A  S  T  S  N  G  R  W  T  R  P  R  Y  L  H
accatcgaggaagatgatattttcaacgaacaaccgtttgatagtttccgagttaaaagc
 T  I  E  E  D  D  I  F  N  E  Q  P  F  D  S  F  R  V  K  S
aagggacaaccaaacaaacgctggttcccgatcaaagaatatcgcgcgggtctaatggaa
 K  G  Q  P  N  K  R  W  F  P  I  K  E  Y  R  A  G  L  M  E
gtttaaaagatttgttttatttgttgctcttattgaacaaaatgaggtttcatcccata
 V  -  K  I  C  F  I  L  L  L  L  L  N  K  M  R  F  H  P  I
```

Fh-NPP-36.2
BN1106_s2392B000036
Unamidated

```
cgccgaacgaaattgtgtttttagccaaacgaaatgtccttgagatttggaatcacaata
 R  R  T  K  L  C  F  -  P  N  E  M  S  L  R  F  G  I  T  I
tggattctggttattgcttgtggaacgtttagtaacaacgtgtattcctctgctcaaatg
 W  I  L  V  I  A  C  G  T  F  S  N  N  V  Y  S  S  A  Q  M
ctcattcccgaggctatgcaatatcgtggacccattggcagtgtaccggtcatgaggatt
 L  I  P  E  A  M  Q  Y  R  G  P  I  G  S  V  P  V  M  R  I
agagatggcatgtatgaatatcacaaaagacgtccaggtgttcgagatatatggaaacgc
 R  D  G  M  Y  E  Y  H  K  R  R  P  G  V  R  D  I  W  K  R
tggtcacctgtgaaagaatttcactacgcggaaccaattgaaatataagaaagatttaac
 W  S  P  V  K  E  F  H  Y  A  E  P  I  E  I  -  E  R  F  N
```

Fh-NPP-38
XLOC_028523
Unamidated

```
accgaaagaaacatggctattacagtgcaaattcgaatgttttgtactaaagccttactg
 T  E  R  N  M  A  I  T  V  Q  I  R  M  F  C  T  K  A  L  L
gcttggcttattctggtggccgactcgaaaccactgtccttttttggaacaaacaccggaa
 A  W  L  I  L  V  A  D  S  K  P  L  S  F  L  E  Q  T  P  E
tcaccggcctcgaacatcggtctgtatagacgcttcttgacatattacaacggaatgaaa
 S  P  A  S  N  I  G  L  Y  R  R  F  L  T  Y  Y  N  G  M  K
aacgtgcccggaaaagagtcgcatatatggcaaccggaatatgattcgatcccggaagac
 N  V  P  G  K  E  S  H  I  W  Q  P  E  Y  D  S  I  P  E  D
atttctggttcaacagtagaagaacagatcaatctgaaaaagcgcattttagctgacttc
 I  S  G  S  T  V  E  E  Q  I  N  L  K  K  R  I  L  A  D  F
aaacgtgccagtattttgtcggactatcgaagatgaggatagatcgtatcagaagtacac
 K  R  A  S  I  L  S  D  Y  R  R  -  G  -  I  V  S  E  V  H
```

Fh-NPP-39
BN1106_s4175B000148
Uncharacterised amidated

```
agaatgaaacacctaatctccgtctgcattctgctgatgagtttgaacttgtgtgcttgg
 R  M  K  H  L  I  S  V  C  I  L  L  M  S  L  N  L  C  A  W
tccacatctcataaattcgatctgacagagctgcttgcctcagcacctgacgtgtatcca
 S  T  S  H  K  F  D  L  T  E  L  L  A  S  A  P  D  V  Y  P
acggagctaagtccggaagatgaagaaattctggaacgtttgatgcacatcgtgaagaca
 T  E  L  S  P  E  D  E  E  I  L  E  R  L  M  H  I  V  K  T
cgattgaacgaggaaatgtacccgctgagaaggttggaacgtcgacggttttctcgtccg
 R  L  N  E  E  M  Y  P  L  R  R  L  E  R  R  R  F  S  R  P
catggtcgttaacctggtccagtttgggttctgcacgtggtttcagttccgttcattggt
 H  G  R  -  P  G  P  V  W  V  L  H  V  V  S  V  P  F  I  G
```

Fh-NPP-40
BN1106_s1470B000085
Unamidated

```
accatgatcgcattgtgtttggccctatctgtcctgatggcattcagtcaagcgcagctg
 T  M  I  A  L  C  L  A  L  S  V  L  M  A  F  S  Q  A  Q  L
tataacttgccggaagatgaggtttttgactatggcgaagacaagggtggtttgtacaat
 Y  N  L  P  E  D  E  V  F  D  Y  G  E  D  K  G  G  L  Y  N
ccagccgtgatgcatcgtgatcgtcgattcctactgggtatgggcctgcaaggaccgaga
 P  A  V  M  H  R  D  R  R  F  L  L  G  M  G  L  Q  G  P  R
agaagaatacatcgaactagacggtcagaagatgattcggacacggacttcgaggatgga
 R  R  I  H  R  T  R  R  S  E  D  D  S  D  T  D  F  E  D  G
gagatccaaaaacgttttctactcggtttaccggcacgcactctacaacgacacaaccac
 E  I  Q  K  R  F  L  L  G  L  P  A  R  T  L  Q  R  H  N  H
aaacgcttcttgttgggactgcctgtgcgctcacgaatggcctaggtcgtacacgtgggt
 K  R  F  L  L  G  L  P  V  R  S  R  M  A  -  V  V  H  V  G
```

Fh-NPP-41
BN1106_s3885B000143
Unamidated (crustacean cardioactive peptide)

```
tcaaatatgaaccgatatccaacgtactgtatgcttctttccgcttgtcttattctatca
 S  N  M  N  R  Y  P  T  Y  C  M  L  L  S  A  C  L  I  L  S
actacgtggacaacgccgacagtcttatcgagccctgtggatcgaattttggaggagagc
 T  T  W  T  T  P  T  V  L  S  S  P  V  D  R  I  L  E  E  S
gcagttgatctgagcgaaccagattacgcagtgcgatatccctctccgcggaggttgttc
 A  V  D  L  S  E  P  D  Y  A  V  R  Y  P  S  P  R  R  L  F
aagtctttgcgcacttttggtcgaaattcaggcccatgggtgcaaattccatcggaatcg
 K  S  L  R  T  F  G  R  N  S  G  P  W  V  Q  I  P  S  E  S
ggcgatgtactcctcgaaccacgtcggcgccgatttttctgcaatccgacaggatgtgtg
 G  D  V  L  L  E  P  R  R  R  R  F  F  C  N  P  T  G  C  V
tgatttggtctaggttctgaacagcacgcaagtagattcacgtacaggattccgtatgtc
 -  F  G  L  G  S  E  Q  H  A  S  R  F  T  Y  R  I  P  Y  V
```

Fh-NPP-42
BN1106_s3747B000115
Unamidated

```
atttacaccgccactgtgatgactgtacaaacggaacccattgcaacttattcttatgca
 I  Y  T  A  T  V  M  T  V  Q  T  E  P  I  A  T  Y  S  Y  A
gcgaacagctccccaaagagtctatattcactgattcaaaagcgaccatggacattgccc
 A  N  S  S  P  K  S  L  Y  S  L  I  Q  K  R  P  W  T  L  P
gacccattgacatgctgttttaatcatctacgctgttgcattgaggatgatcaacctgat
 D  P  L  T  C  C  F  N  H  L  R  C  C  I  E  D  D  Q  P  D
tcg
 S
```

Fh-NPP-43
BN1106_s43B000507
Unamidated

```
atcgttttccattccaaaacaatgaaaaatcagctttgcggaatctttgttctcctcagc
 I  V  F  H  S  K  T  M  K  N  Q  L  C  G  I  F  V  L  L  S
ttgctgctgctttggagcgaagtgtgttcggggaacccgaacgaagcagacaaacgggcc
 L  L  L  L  W  S  E  V  C  S  G  N  P  N  E  A  D  K  R  A
agtttttcctatttcaaacgctctccagccgattcggaaacggaagatccatccgaggaa
 S  F  S  Y  F  K  R  S  P  A  D  S  E  T  E  D  P  S  E  E
acaaaaagaggaagttttatgtttcgcagacacttcccgtcaaaatggactaacaaacgg
 T  K  R  G  S  F  M  F  R  R  H  F  P  S  K  W  T  N  K  R
ggctctctacttttctacaaacgtggccgggaaccatacgagagtaaactaattcgggta
 G  S  L  L  F  Y  K  R  G  R  E  P  Y  E  S  K  L  I  R  V
ccgtacgagtatcgggatctgccggaagatgggacagaacatgtgggacctttgaatac
 P  Y  E  Y  R  D  L  P  E  D  G  T  E  H  V  G  P  F  E  Y
cagaaaagagccagtttctccttctaagattgttgcgttgtataattgaccaaagataag
 Q  K  R  A  S  F  S  F  -  D  C  C  V  V  -  L  T  K  D  K
```

Fh-NPP-47
BN1106_s1579B000120
L/M/Iamide

```
gaccaactgaatttgcggttgatgcgggcaaagtttcgcctaatttcattggtccaccta
 D  Q  L  N  L  R  L  M  R  A  K  F  R  L  I  S  L  V  H  L
cgggacagactgaaggggtcagcaagcagaatatatatatatataacaacactttgaat
 R  D  R  L  K  G  V  S  K  Q  N  I  Y  I  Y  N  N  T  L  N
cgtcacagttacagtcctctttcattcagttcctgggtgaaaatgatgtcacgcgtcgga
 R  H  S  Y  S  P  L  S  F  S  S  W  V  K  M  M  S  R  V  G
tttgcctggatttttctgatctttttgggtttcgagctggtcgttcaatcgcatccagtc
 F  A  W  I  F  L  I  F  L  G  F  E  L  V  V  Q  S  H  P  V
gaggaaggtctaagtgagcggcagttttgctgaattgtgtcgaccagtgttttccatca
 E  E  G  L  S  E  R  Q  F  L  L  N  C  V  D  Q  C  F  P  S
aggtcacgctatcaactgatgcaatgtgtggtcgactgtagtgaacaacgctcgaaacgg
 R  S  R  Y  Q  L  M  Q  C  V  V  D  C  S  E  Q  R  S  K  R
gcgaaattcttcatgctcggtcggaagtaatctgatttgcccagttgtccattatgcttg
 A  K  F  F  M  L  G  R  K  -  S  D  L  P  S  C  P  L  C  L
```

Fh-NPP-48
BN1106_s1830B000391
Neuropeptide KY

```
gtgagctcgagaaaactattcagtcgggaagtgatactgatacactgcagaaaaatgatg
 V  S  S  R  K  L  F  S  R  E  V  I  L  I  H  C  R  K  M  M
cgcacaagctgctttgtgatttcgattctgtccctgattctcactgtgatggtgtggcaa
 R  T  S  C  F  V  I  S  I  L  S  L  I  L  T  V  M  V  W  Q
accgaacaagccctgatcagaccgggagatttgcgtctgagacgagcctacctttctccc
 T  E  Q  A  L  I  R  P  G  D  L  R  L  R  R  A  Y  L  S  P
gatttggatttggacaatctgttggatttcgggatcgcgttgggcactcggcgtttaaat
 D  L  D  L  D  N  L  L  D  F  G  I  A  L  G  T  R  R  L  N
gtggatcagccggacgaagaacctcgactccgcggcagcgtgatgcgttacgggaagtaa
 V  D  Q  P  D  E  E  P  R  L  R  G  S  V  M  R  Y  G  K  -
```

Fh-NPP-N/A
BN1106_s940B000161
FMRFamide

```
ggaatgtggaagatactgttcctgttgacactatcactctgtatgctgagctcagccgaa
 G  M  W  K  I  L  F  L  L  T  L  S  L  C  M  L  S  S  A  E
gctggtgagttcgaccaaggaccggagagctacgctttaaaacgatcggaagaaaagaaa
 A  G  E  F  D  Q  G  P  E  S  Y  A  L  K  R  S  E  E  K  K
cgaaagcagatatttcgttacggtaaaagggatctgtatggatggagatttcccgtattg
 R  K  Q  I  F  R  Y  G  K  R  D  L  Y  G  W  R  F  P  V  L
aatgaatatatggactactaatgcattgtttgtaaacgtgtgaatttttgctttgcaatt
 N  E  Y  M  D  Y  -  C  I  V  C  K  R  V  N  F  C  F  A  I
```