

A

|                            |  | 10              | 20               | 30         | 40                              | PSI-BLAST<br>e-value |  |
|----------------------------|--|-----------------|------------------|------------|---------------------------------|----------------------|--|
| HGE024 Contig2             |  | -ETLFTANCLDRKDC | KKHC-KSKGCKEMKCE | QIIKPTWRC  | LCIM-CSK-                       |                      |  |
| Q10726 6.1 Pi1             |  | -----VKCRGTS    | DCGRP            | CQQQTGCPNS | KCIN-----RMCKCYG-C---           | 0.15                 |  |
| P80719 6.2 MaurTx(1txm)    |  | -----VSCTGS     | KDCYAP           | CRKQTGCPNA | KCIN-----KSCCKYG-C---           | 0.14                 |  |
| P59867 6.3 HsTx1(1quz)     |  | -----ASCRTP     | KDCADP           | CRKETGCPYG | KCMN-----RKCKCNR-C---           | 0.49                 |  |
| P58498 6.4 Pi4(1n8m)       |  | ---IEAIRCGGS    | RDCYRP           | CQKRTGCPNA | KCIN-----KTCKYG-CS--            | 0.005                |  |
| P58490 6.5 Pi7(1qky)       |  | ---DEAIRCTGT    | KDCYIP           | CRYITGCFNS | RCIN-----KSCCKYG-CT--           | 0.033                |  |
| Q6XLL9 6.6 OcKTx1          |  | ---AEVIKCRTP    | KDCAGP           | CRKQTGCPHG | KCMN-----RTCRCNR-C---           | 7e-12                |  |
| Q6XLL8 6.7 OcKTx2          |  | ---AEVIKCRTP    | KDCADP           | CRKQTGCPHG | KCMN-----RTCRCNR-C---           | 2e-12                |  |
| Q6XLL7 6.8 OcKTx3          |  | ---AEVIKCRTP    | KDCAGP           | CRKQTGCPHA | KCMN-----KTCRCHR-C---           | 3e-12                |  |
| Q6XLL6 6.9 OcKTx4          |  | ---AEIIRCSGT    | RECYAP           | CQKLTGCLNA | KCMN-----KACKYG-CV--            | 7e-06                |  |
| Q6XLL5 6.10 OcKTx5         |  | ---AEVIRCSGS    | KQCYGP           | CKQQTGCTNS | KCMN-----CKCYG-C---             | 2e-05                |  |
| P0C194 6.11 ISTx(1wmt)     |  | --VHTNIPCRGTS   | DCYEP            | CEKKTNCARA | KCMN-----RHCCNYNCPW-            | 5e-07                |  |
| P0C166 6.12 AnurocTx       |  | -----QKETG      | PQHCTNF          | CRKNK-CTHG | KCMN-----RKCKCFN-CK--           | >0.5                 |  |
| P84094 6.13 Spinoxin(1v56) |  | -----IRCSGSR    | DCYSP            | CMKQTGCPNA | KCIN-----KSCCKYG-C---           | 0.076                |  |
| P84864 6.14 HgeTx1         |  | ----TGTS        | CISP             | KQCTEP     | CRAK-GCKHGKCMN-----RKCHCML-CL-- | 0.33                 |  |
|                            |  |                 |                  |            |                                 |                      |  |
| HGE025 Contig5             |  | DTMKKRS         | DYCSNDF          | CFFS       | CRRDR-CARGD                     | CEN-----GKCVCKN-CHLN |  |
| P0C166 6.12 AnurocTx       |  | -----QKETG      | PQHCTNF          | CRKNK-CTHG | KCMN-----RKCKCFN-CK--           | 1.1*                 |  |

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|                        | 10       | 20        | 30       | 40            | 50     | 60      | 70         | %Identity<br>with Scorpine |         |           |        |     |
|------------------------|----------|-----------|----------|---------------|--------|---------|------------|----------------------------|---------|-----------|--------|-----|
| Hg scorpine like 2     | YAHKAIDV | LTPMIGVPV | VSKIVNNA | AAKQLVHKI     | AKNQQL | CMFNKDV | AGWCEKSC   | QQSAHQKGYCHG               | TKCKG   | IPLNYK    | 46     |     |
| P56972 Scorpine        | GWINEEKI | QKKIDERM  | GNTVLGG  | MAKAIV-HKM    | AKNEFQ | CMANMD  | MLGNCEKH   | CQ-TSGE                    | KGYCHG  | TKCKG     | TPLSY- | 100 |
| Q5WR03 Opiscorpine1 ts | KWFNEKSI | QNKIDEK   | IGKNFLGG | MAKAVV-HKL    | AKNEFM | CVANVDM | TKSCDTH    | CQKASGE                    | KGYCHG  | TKCKG     | VPLSY- | 70  |
| Q5WR02 Opiscorpine2 ts | KWLNEKSI | QNKIDEK   | IGKNFLGG | MAKAVV-HKL    | AKNEFM | CMANMD  | PTGSCDTH   | CQKASGE                    | KGYCHG  | TKCKG     | VPLSY- | 73  |
| Q5WQZ7 Opiscorpine3 ts | KWLNEKSI | QNKIDEK   | IGKNFLGG | MAKAVV-HKL    | AKNEFM | CVANVDM | TKSCDTH    | CQKASGE                    | KGYCHG  | TKCKG     | VPLSY- | 70  |
| Q5WQZ9 Opiscorpine4 ts | KWLNEKSI | QNKIDEK   | IGKNFLGG | MAKAVV-HKL    | AKNEFM | CVANID  | MTKSCDTH   | CQKASGE                    | KGYCHG  | TKCKG     | VPLSY- | 70  |
| Q0GY40 HgeScpl-1       | GWMSEKKV | QGILDKK   | LPEGI    | IRNAAKAIV-HKM | AKNQFG | CFANVD  | VKGDCKRH   | CK-AEDKE                   | GICHG   | TKCKG     | VPSYL  | 51  |
| Q0GY41 HgeβKTx         | ----KSTV | GQKLK     | KKLNQ--  | AVDKVK---     | EVLNK  | SEYMC   | CPV---VSSF | CKQHCA-RLGKS               | GQCDLLE | CICS----- | 26     |     |