```
OsMCA1   MA-SWENLGDVATVVQLTGLDAVRLISMIVKAASTARLHKRNCRRFAQHLKLIGGLLEQL
MCA1     MSHSWDGLGEIASVAQLTGLDAVKLIGLIVKAANTAWMHKKNCRQFAQHLKLIGNLLEQL
MCA2     MANSWDQLGEIASVAQLTGIDALKLIGMIVNAANTARMHKKNCRQFAHHLKLIRNLLEQI
         *: **: **::*:*.****:**::**.:**:**.** :**:***:**:***** .****:

OsMCA1   RVSELKKYPETREPLEQLEDALRRAYLLVHSCQDRSYLYLLAMGWNIVYQFRKAQNEIDN
MCA1     KISEMKKYPETREPLEGLEDALRRSYLLVNSCRDRSYLYLLAMGWNIVYQFRKHQDEIDR
MCA2     KNSEMNQRSEILEPLQGLDDALRRSYILVKSCQEKSYLYLLAMGWNIVNQFEKAQNEIDL
         : **::: .*  ***: *:*****:*:**:**:::************* **.* *:***

OsMCA1   YLRLVPLITLVDNARVRERMEYIERDQCEYSFDDEDKEVQDALLNPDPS-TNPTVVLKKT
MCA1     FLKIIPLITLVDNARIRERFEYIDRDQREYTLDEEDRHVQDVILKQESTREAAS-VLKKT
MCA2     FLKIVPLINMADNARIRERLEAIERDQREYTLDEEDRKVQDVILKQESTREAATSVLKKT
         :*:::***.:.****:***:* *:*** **::*:**:.***.:*: :.:   .: *****

OsMCA1   LSCSYPNLPFNEALRKESEKLQVELQRSQSNMDMGQCEVIQHLLGVTKTVASSIP--EKC
MCA1     LSCSYPNLRFCEALKTENEKLQIELQRSQEHYDVAQCEVIQRLIGVTQAAAAVEPDSEKE
MCA2     LSRSYPNMGFCEALKTEEEKLQLELQRSRARYDADQCEVIQRLIDVTQTAATVEPNLEKV
         ** ****: * ***:.*.****:*****: . *  ******:*:.**::.*:  *  **

OsMCA1   ATPKVSEKADSNHTKVSEDSAKTYHDDSPKKQKDACTAPRSSPPSSYGHDLVSSRG---S
MCA1     LTKKASKKSERSSSMKTEY---SYDEDSPKK-SSTRAASRSTSNVSSGHDLLSRRASQAQ
MCA2     LTKKE----ELTSSKKRDD---LYDTDS----SSIRADSRSTSYVSSGHELLSGRS--LQ
          * *     : . :   :     *. **    ..  : .**:.  * **:*:* *.   .

OsMCA1   YSDEWHADLLGCCSEPSLCLRTFFFPCGTFSKIASIAKNRPMSSSEACNDIMAYSLILSC
MCA1     HHEEWHTDLLACCSEPSLCFKTFFFPCGTLAKIATAASNRHISSAEACNELMAYSLILSC
MCA2     HRGNWHADLLDCCSEPCLCLKTLFFPCGTLAKISTVATSRQISSTEVCKNLIVYSLILSC
         :  :**:*** *****.**::*:******::**:: *..* :**:*.*::::.*******
                          ---------------------S1      --------------

OsMCA1   CCYTCCVRRKLRQKLNIAGGCIDDFLSHLMCCCCALVQEWREVEIR-GAYG-ERT--KIS
MCA1     CCYTCCVRRKLRKTLNITGGFIDDFLSHVMCCCCALVQELREVEIR-GAYGTEKT--KIS
MCA2     CCYTCCIRKKLRKTLNITGGCIDDFLSHLMCCCCALVQELREVEIHRASYGTEKSNKEMS
         ******:*:***:.***:** *******:********** *****: .:** *::  ::*
         ------S2

OsMCA1   PPSFQYMEH
MCA1     PPSSQFMEH
MCA2     PPTPQFMEE
         **: *:**.
```