**S1\_data:**

**Clustal O analysis of all Drosophila Mrj isoforms**

**Mrj-PA MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDEK  
Mrj-PB MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDEK  
Mrj-PC MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDEK  
Mrj-PD MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDEK  
Mrj-PE MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDAR  
Mrj-PG MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDAR  
Mrj-PH MVDYYKILDVSRSATDSEVKKAYRKLALKWHPDKNPDNLDEANKRFRELSEAYEVLSDAR  
Mrj-PF ------------------------------------------------------------  
  
Mrj-PA ------------------------------------------------------------  
Mrj-PB ------------------------------------------------------------  
Mrj-PC ------------------------------------------------------------  
Mrj-PD ------------------------------------------------------------  
Mrj-PE KRRIYDARATLHKSSNSGSSSSNSSSYTRYRNGGTGGSSSYGRDYDYDYYPGSGYGSGSG  
Mrj-PG KRRIYDARATLHKSSNSGSSSSNSSSYTRYRNGGTGGSSSYGRDYDYDYYPGSGYGSGSG  
Mrj-PH KRRIYDARATLHKSSNSGSSSSNSSSYTRYRNGGTGGSSSYGRDYDYDYYPGSGYGSGSG  
Mrj-PF ------------------------------------------------------------  
  
Mrj-PA ---------------------------KRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PB ---------------------------KRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PC ---------------------------KRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PD ---------------------------KRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PE RRSGNRYQAFTFRNIFEGTPFHKMFEKKRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PG RRSGNRYQAFTFRNIFEGTPFHKMFEKKRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PH RRSGNRYQAFTFRNIFEGTPFHKMFEKKRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
Mrj-PF ------------------MYSHFLTEKKRRIYDEYGKDGLGDRGQSRSHARHHYSTHDFD  
  
Mrj-PA DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PB DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PC DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PD DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PE DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PG DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PH DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
Mrj-PF DFDILGGFQFAFRPPEEVFREFFGIHSPFADLFRDANGHSNGSTSGSSGSRRNGGSSGSS  
  
Mrj-PA RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PB RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PC RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PD RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PE RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PG RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PH RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
Mrj-PF RHHHHHHQHKVASPFGAPMLNYSMMDFFMPTSGFTSFSSMTHGNGSSGVTHISSGPGASV  
  
Mrj-PA KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PB KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PC KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PD KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PE KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PG KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PH KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ  
Mrj-PF KRTSTSTVFVNGKKLMTKRVVENGKETVFSYENDVLKSKTVMGSLQ**