

**Figure 1.** Comparison of the sequences of four *Apis mellifera* proteins belonging to the major royal jelly protein (MRJP) family. The peptides identified by RP-LC-MS/MS from 50-kDa allergen detected by seven honey allergic patients are highlighted in grey. Sequences are ordered based on its homology with MRJP1, the higher sequence coverage (78%) obtained. “\*” positions which have a single, fully conserved residue; “.” conservation between groups of strongly similar properties; “.” conservation between groups of weakly similar properties.

sp O18330 MRJP1	-MTRLFMLVCLGIVCQGTGNILR-----GESLNKSLPILHEWKFFDYDFGSDERRQDAI	54
sp O97432 MRJP5	MTTWLLLVVCLGIACQGITSVTV--RENSPRKLANSMNVIHEWKYLDYDFGSDERRQAAM	58
sp O77061 MRJP2	MTRWLFMVACLGIACQGAIVR-----ENSPRNLEKSLNVIHEWKYFDYDFGSEERRQAAI	55
sp Q17060 MRJP3	MTKWLLLVVCLGIACQDVTSAAVNHQRKSANNLAHSMKVLYEWKHIIDDFGSDERRDAAI	60
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sp O18330 MRJP1	LSGEYDYKNYPSDIDQWHDKIFVTMLRYNGVPSLNVISKKVGDDGGLIQLPYPDWSFAK	114
sp O97432 MRJP5	QSGEYDHTKNYPFDVDQWRGMTFVTVPRYKGVPSLNVISEKIGNGGRLQLPYPDWSWAN	118
sp O77061 MRJP2	QSGEYDHTKNYPFDVDQWRDKTFTVTLRYDGVPSLNVISGKTGKGGRLQLPYPDWSFAE	115
sp Q17060 MRJP3	KSGEYDHTKNYPFDVDRWRDKTFTVTLERNNGVPSLNVVTKKGGGLLRYPDWSFAK	120
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sp O18330 MRJP1	YDDCSGIVSASKLAIDKCDRLWVLDLGLVNNTQPMCSPKLLTDFDLTTSQLLKQVEIPHDI	174
sp O97432 MRJP5	YKDCSGIVSAYKIAIDKDFDRLWLILDSGIINNTQPMCSPKLHVFDLNTSHQLKQVMPHDI	178
sp O77061 MRJP2	FKDCSKIVSAFKIAIDKDFDRLWVLDLGLVNRTVPVCAKPLHVFDLKTSNHLKQIEIPHDI	175
sp Q17060 MRJP3	YEDCSGIVSAFKIAVDKDFDRLWVLDLGLVNNTQPMCSPKLLTDFDLKTSKLVKQVEIPHDI	180
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sp O18330 MRJP1	AVNATTGKGRLLS LAVQSLDCNTNSDTMVI IADEKGEGLIVYHNSDDSFHRLTSNTFDYD	234
sp O97432 MRJP5	AVNASTGNGGLVSLVQAMDP---VNTIVYMADDKGDALIVYQNSDES FHLRLTSNTFDYD	235
sp O77061 MRJP2	AVNATTGKGLVSLAVQAIDL---ANTLVYMAADHKGDALIVYQNADDS FHLRLTSNTFDYD	232
sp Q17060 MRJP3	AVNATTGMGELVSLAVQAIDR---TNTMVI IADEKGEGLIMYQNSDDSFHRLTSNTFDYD	237
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sp O18330 MRJP1	PKFKTMTIDGESYTAQDGISGMALSPMTNNLYYSPVASTSLYYVNTAQFRTSDYQQNDIH	294
sp O97432 MRJP5	PKYIKMMDAGESFTAQDGI FGMALSPMTNNLYYSPSSRLYYVNTKPFMKSEYGANNVQ	295
sp O77061 MRJP2	PRYAKMTIDGESFTLKNIGCMALSPVTNNLYYSPASHGLYYVNTAPFMKSQFGENNVQ	292
sp Q17060 MRJP3	PRYTKLTVAGESFTVKNIGYIYGIASLSPVTNNLYYSPLLSHGLYYVDTEQFSNPQYEENNVQ	297
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sp O18330 MRJP1	YEGVQNILDTSQSSAKVVS KSGVLF FFLVGLVGDALGCWNEHRTLERHNI RTVAQSDETLQMI	354
sp O97432 MRJP5	YQGVQDIFNTESI AKIMSKNGVLF FGLMNSAIGCWNEHQPLQRENMDMVAQNEETLQTV	355
sp O77061 MRJP2	YQGSEDI LNTQSLAKAVSKNGVLFVGLVGN SAVGCWNEHQSLQRQNL E MVAQNDRTLQMI	352
sp Q17060 MRJP3	YEGSQDILNTQSF GKVVSKNGVLFGLVGN SGIACVNEHQVLRQRE SFDVVAQNEETLQMI	357
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sp O18330 MRJP1	ASMKIKEALPHVPIFDR-----	371
sp O97432 MRJP5	VAMKMMHL-PQSNKMNRMHRMNRVNRVNRMDRMDRIDRMDRMDRMDTMDTMDRIDRMDRM	414
sp O77061 MRJP2	AGMKIKEELPHFVG-----	366
sp Q17060 MRJP3	VSMKIMENLPQSGR-----	371
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sp O18330 MRJP1	-----	371
sp O97432 MRJP5	DRIDRIDRMHTMDTMDTMDRDTDKMS SMDRMDRMDRVDRMDTMDRDTDKMS SMDRMDRMDRV	474
sp O77061 MRJP2	-----	366
sp Q17060 MRJP3	-----	371
sp O18330 MRJP1	-----	371
sp O97432 MRJP5	DTMDTMDTMDRMDRMDRMDRMDRMDTMDRDTDKMSRIDRMDKIDRMDRMDRTRNMDRM	534
sp O77061 MRJP2	-----	366
sp Q17060 MRJP3	-----	371
sp O18330 MRJP1	----YINREYILVLSNKMQKMNNDNFNFDVNFVFRIMNANVNELILNTRCENPDNDRTPFK	427
sp O97432 MRJP5	NRMNRQMN EYMMALSMK LQKFINNDYFNFEVNFRI LGANVDLIMNTRCANS DNQNNQN	594
sp O77061 MRJP2	-SNKPVKDEYMLVLSNRMQKIVNDDNFNFDVNFRI LGANVKELIRNTHCVNNQNNDNI--	423
sp Q17060 MRJP3	-INDEPGEYMLALS NRMQKIVNDDNFNFDVNFRI LGANVDDL MRNTRCGRYHNQAGNQ	430
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sp O18330 MRJP1	ISIHL-----	432
sp O97432 MRJP5	KHNN-----	598
sp O77061 MRJP2	-----	423
sp Q17060 MRJP3	NADNQADNQANNQADNQANKQNGNRQNDNRQNDNKQNGNRQNDNKQNGNRQNDNKQ	490
sp O18330 MRJP1	-----	432
sp O97432 MRJP5	-----	598
sp O77061 MRJP2	-----	423
sp Q17060 MRJP3	NGNRQNGKQNDNKQNGNRQNDNKRNQNRQNDNQNNQNDNNRNDNQVHSSKLN	544

**Figure 2.** IgE-immunoblotting-inhibition assay performed with a pool of sera from the patients studied. Lanes: h) honey extract; rj) royal jelly extract.

