# Recombinant Apis mellifera Major royal jelly protein 1 (MRJP1)

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| **Product Code** | CSB-YP522725DNK |
| **Relevance** | Major royal jelly protein 1: induces the differentiation of honeybee larvae into queens through an Egfr-mediated signaling pathway. Promotes body size increase by activating p70 S6 kinase, stimulates ovary development by augmenting the titer of vitellogenin (Vg) and juvenile hormone, and reduces developmental time by increasing the activity of mitogen-activated protein kinase and inducing the 20-hydroxyecdysone protein (20E). Most abundant protein found in the royal jelly which is the food of the queen honey bee larva. The royal jelly determines the development of the young larvae and is responsible for the high reproductive ability of the honeybee queen.Jellein-1: has antibacterial activity against the Gram-positive bacteria S.aureus ATCC 6535, S.saprophyticus and B.subtilis CCT2471, and the Gram-negative bacteria E.coli CCT1371, E.cloacae ATCC 23355, K.pneumoniae ATCC 13883 and P.aeruginosa ATCC 27853, and antifungal activity against C.albicans. Lack cytolytic activity and does not induce rat peritoneal mast cell degranulation.Jellein-2: has antibacterial activity against the Gram-positive bacteria S.aureus ATCC 6535, S.saprophyticus and B.subtilis CCT2471, and the Gram-negative bacteria E.coli CCT1371, E.cloacae ATCC 23355, K.pneumoniae ATCC 13883 and P.aeruginosa ATCC 27853, and antifungal activity against C.albicans. Lack cytolytic activity and does not induce rat peritoneal mast cell degranulation.Jellein-4: lacks antibacterial and antifungal activity. Lacks cytolytic activity and does not induce rat peritoneal mast cell degranulation. |
| **Abbreviation** | Recombinant Apis mellifera MRJP1 protein |
| **Storage** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |
| **Uniprot No.** | O18330 |
| **Alias** | 56-kDa protein 4 ;p56kP-4Bee-milk proteinRoyalactin |
| **Product Type** | Recombinant Protein |
| **Immunogen Species** | Apis mellifera (Honeybee) |
| **Purity** | ≥ 90% as determined by SDS-PAGE. |
| **Sequence** | NILRGESLNKSLPILHEWKFFDYDFGSDERRQDAILSGEYDYKNNYPSDIDQW HDKIFVTMLRYNGVPSSLNVISKKVGDGGPLLQPYPDWSFAKYDDCSGIVSAS KLAIDKCDRLWVLDSGLVNNTQPMCSPKLLTFDLTTSQLLKQVEIPHDVAVNAT TGKGRLSSLAVQSLDCNTNSDTMVYIADEKGEGLIVYHNSDDSFHRLTSNTFD YDPKFTKMTIDGESYTAQDGISGMALSPMTNNLYYSPVASTSLYYVNTEQFRT SDYQQNDIHYEGVQNILDTQSSAKVVSKSGVLFFGLVGDSALGCWNEHRTLE RHNIRTVAQSDETLQMIASMKIKEALPHVPIFDRYINREYILVLSNKMQKMVNND |

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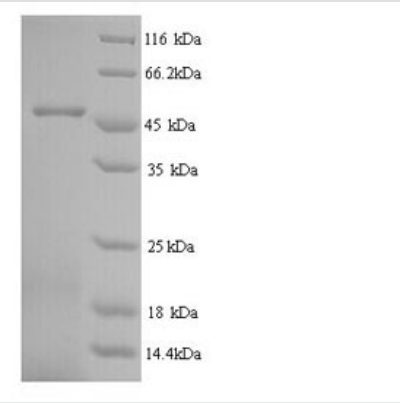
| | FNFDDVNFRIMNANVNELILNTRCENPDNDRTPFKISIHL |
| **Research Area** | Others |
| **Source** | Yeast |
| **Target Names** | MRJP1 |
| **Protein Names** | Recommended name: Major royal jelly protein 1 Short name= MRJP-1 Alternative name(s): 56-kDa protein 4 Short name= p56kP-4 Bee-milk protein Royalactin Cleaved into the following 3 chains: 1. Jellein-1 Alternative name(s): |
| **Expression Region** | 20-432aa |
| **Notes** | Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week. |
| **Tag Info** | N-terminal 6xHis-tagged |
| **Mol. Weight** | 48.9kDa |
| **Protein Length** | Full Length of Mature Protein |
| **Image** |  (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel. |
| **Reconstitution** | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference. |
| **Shelf Life** | The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself.<br>Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C. |