

Recombinant *Apis mellifera* Major royal jelly protein 1

Catalog No: #AP73022



Package Size: #AP73022-1 20ug #AP73022-2 100ug #AP73022-3 1mg

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Description

Product Name	Recombinant <i>Apis mellifera</i> Major royal jelly protein 1
Brief Description	Recombinant Protein
Host Species	Yeast
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:20-432aaSequence Info:Full Length
Other Names	56-KDA protein 4 ;p56kP-4Bee-milk proteinRoyalactin
Accession No.	O18330
Uniprot	O18330
GeneID	406090;
Calculated MW	48.9 kDa
Tag Info	N-terminal 6xHis-tagged
Target Sequence	NILRGESLNKSLPILHEWKFFDYDFGSDERRQDAILSGEYDYKNNYPSDIDQWHDKIFVTMLRYNGVPSSLNVI SKKVGDDGGLLPYPDWSFAKYDDCSGIVSASKLAIDKCDRLWVLDSGLVNNTQPMCSPKLLTFDLTTSQLLK QVEIPHDVAVNATTGKGRLLSSLAVALQSLDCNTNSDTMVYIADEKGEGLIVYHNSDDSFHRLTSNTFDYDPKFTK MTIDGESYTAQDGISGMALSPMTNNLYSPVASTSLYYVNTEQFRTSDYQQNDIHYEGVQNILDQSSAKVVS KSGVLFFGLVGDALGVCWNEHRTLERNIRTVAQSDETLQMIASMKIKEALPHVPIFDRIYINREYILVLSNKMQ KMNNDNFDDVNFRIANANVNELILNTRCENPDNDRTPFKISIH
Formulation	Tris-based buffer50% glycerol
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.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

Major royal jelly protein 1: induces the differentiation of honeybee larvae into queens through an Egr-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.

References

A hypopharyngeal gland protein of the worker honeybee *Apis mellifera* L. enhances proliferation of primary-cultured rat hepatocytes and suppresses apoptosis in the absence of serum. Kamakura M., Sakaki T. *Protein Expr. Purif.* 45:307-314(2006) Research Topic: Others

Note: This product is for in vitro research use only