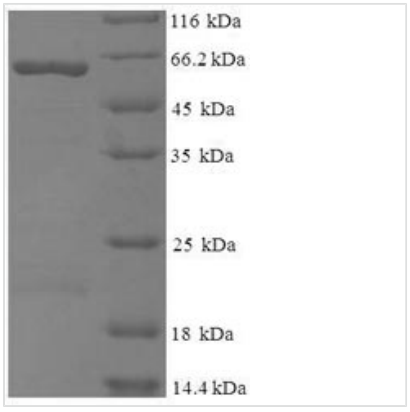
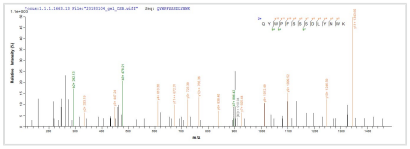
Recombinant Moloney murine leukemia virus Gag polyprotein (gag), partial

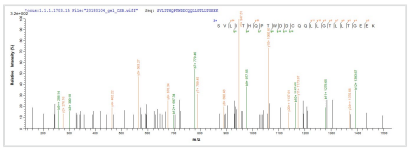
Product Code	CSB-EP356017MHKe0
Relevance	Gag polyprotein plays a role in budding and is processed by the viral protease during virion maturation outside the cell. During budding, it recruits, in a PPXY-dependent or independent manner, Nedd4-like ubiquitin ligases that conjugate ubiquitin molecules to Gag, or to Gag binding host factors. Interaction with HECT ubiquitin ligases probably link the viral protein to the host ESCRT pathway and facilitate release.
Abbreviation	Recombinant Moloney murine leukemia virus Gag polyprotein, partial
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.	P03332
Alias	Core polyprotein
Product Type	Recombinant Protein
Immunogen Species	Moloney murine leukemia virus (isolate Shinnick) (MoMLV)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	PLRAGGNGQLQYWPFSSSDLYNWKNNNPSFSEDPGKLTALIESVLITHQPTW DDCQQLLGTLLTGEEKQRVLLEARKAVRGDDGRPTQLPNEVDAAFPLERPDW DYTTQAGRNHLVHYRQLLLAGLQNAGRSPTNLAKVKGITQGPNESPSAFLERL KEAYRRYTPYDPEDPGQETNVSMSFIWQSAPDIGRKLERLEDLKNKTLGDLVR EAEKIFNKRETPEEREERIRRETEEKEERRRTEDEQKEKERDRRRHREMSKLL
Source	E.coli
Target Names	gag
Expression Region	216-478aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal GST-tagged
Mol. Weight	57.6kDa
Protein Length	Partial
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP356017MHKe0 could indicate that this peptide derived from E.coli-expressed Moloney murine leukemia virus (isolate Shinnick) (MoMLV) gag.



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Description

Like all recombinant proteins, this Recombinant MoMLV gag protein was encoded by recombinant DNA. The recombinant DNA was introduced to a plasmid in which the gene of gag was cloned downstream of a promoter region. When the plasmid was introduced to the cells of E.coli, the E.coli's own protein synthesis pathways would then result in the expression of the gag protein. And the next step was protein purification. The purity of this recombinant protein is 90%+ determined by SDS-PAGE.

Gag polyprotein exists in all retroviruses, and is a polyprotein comprised of three major functional domains: matrix (MA), capsid (CA), and nucleocapsid (NC). Prior to maturation and viral budding, the full-length Gag protein plays important roles in viral assembly and genome packaging, topics that have been the focus of several review papers. The full-length bovine leukemia virus (BLV) Gag has an elongated rod-shaped structure that is relatively rigid, with the exception of the linker between the MA and CA domains. Deletion of the MA domain maintains the elongated structure but alters the rate of BLV Gag-facilitated annealing of two complementary nucleic acids. Findings suggested that BLV Gag adopts an extended structure in solution and is more similar to MLV Gag and RSV Gag than HIV-1 Gag.

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.

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