Recombinant PGPSA protein (His tag)

Catalog Number	532414
Synonyms	Protein semmelweis
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q9VYX7
Gene ID	32099
Molecular Weight	Predictes a molecular mass of 20.21 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band.

Product Information

Sequence Region	35-203
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 35-203 aa (Q9VYX7) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Peptidoglycan-recognition protein SA (PGRP-SA) fragment (residues 35-203) from Drosophila melanogaster, encompassing the key N-acetylmuramoyl-L-alanine amidase domain. This high-purity fragment is engineered for studying innate immune responses, specifically peptidoglycan binding and Toll pathway activation mechanisms in Gram-positive bacterial recognition. Peptidoglycan-recognition protein SA (PGRP-SA) is a secreted immune protein in Drosophila melanogaster that plays a critical role in innate immunity by detecting Gram-positive bacterial infections. It specifically binds to diaminopimelic acid-type and lysine-type peptidoglycans, activating the Toll pathway upstream of spz activating enzyme SPE. While partially redundant with PGRP-SD, PGRP-SA forms complexes with GNBP1 to initiate proteolytic cleavage of Spätzle, triggering immune responses. The protein exhibits L,D-carboxypeptidase activity specific to DAP-type peptidoglycans and is secreted into the hemolymph, where it functions as a key pattern recognition receptor in the fruit fly's defense system against bacterial pathogens.