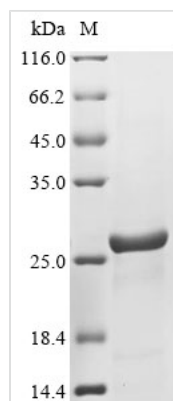




# Recombinant Drosophila melanogaster Peptidoglycan-recognition protein SC2 (PGRP- SC2)

<b>Product Code</b>	CSB-EP892684DLU
<b>Abbreviation</b>	Recombinant Drosophila melanogaster PGRP-SC2 protein
<b>Storage</b>	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.
<b>Uniprot No.</b>	Q9V4X2
<b>Form</b>	Liquid or Lyophilized powder
<b>Storage Buffer</b>	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol.If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
<b>Product Type</b>	Recombinant Protein
<b>Immunogen Species</b>	Drosophila melanogaster (Fruit fly)
<b>Purity</b>	Greater than 90% as determined by SDS-PAGE.
<b>Sequence</b>	VTIISKSEWGGRSATSKTSLANYLSYAVIHHTAGNYCSTKAACITQLQNIQAYH MDSLGWADIGYNFLIGGDGNVYEGRGWNVMGAHATNWNSKSIGISFLGNYNT NTLTSAQITAAKGLLSDAVSRGQIVSGYILYGHRQVGSTECPGTNIWNEIRTWS NWKA
<b>Research Area</b>	Others
<b>Source</b>	E.coli
<b>Target Names</b>	PGRP-SC2
<b>Expression Region</b>	21-184aa
<b>Notes</b>	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
<b>Tag Info</b>	N-terminal 10xHis-tagged and C-terminal Myc-tagged
<b>Mol. Weight</b>	25.2 kDa
<b>Protein Length</b>	Full Length of Mature Protein
<b>Image</b>	



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

## Description

The gene fragment encoding the 21-184aa of the *Drosophila melanogaster* peptidoglycan-recognition protein SC2 (PGRP-SC2) was co-expressed with the N-terminal 10xHis-tag and C-terminal Myc-tag in the *E.coli*. The resulting protein is the recombinant *Drosophila melanogaster* PGRP-SC2 protein. Its purity is greater than 90% determined by SDS-PAGE. Importantly, this recombinant *Drosophila melanogaster* PGRP-SC2 protein has been cited by a high score-IF paper.

As its name implies, PGRP-SC2 being an amidase degrades bacterial peptidoglycan (PGN) and thus participates in innate immunity. PGRP-SC2 is the homolog of the anti-inflammatory molecules PGLYRP1-4 and is a negative regulator of dampening immune deficiency (IMD)/Relish innate immune signaling. Linlin Guo *et al.* demonstrated that in the aging intestine of *Drosophila*, chronic activation of Foxo decreases expression of PGRP-SC2, inhibition of which results in deregulation of Rel/NF $\kappa$ B activity, leading to commensal dysbiosis, stem cell hyperproliferation, and epithelial dysplasia. Overexpression of PGRP-SC2 in enterocytes prevents dysbiosis, promotes tissue homeostasis, and extends lifespan. Yuchen Chen *et al.* showed that flies bearing malignant yki3SA-gut tumors cause bacterial overload through the inhibition of gut PGRP-SC2 and consequent systemic IMD-NF- $\kappa$ B activation.

## 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

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