PGLYRP1/PGRP-S Protein, Mouse (HEK293, His)

Cat. No.:	HY-P76543
Synonyms:	Peptidoglycan recognition protein 1; Cytokine tag7; PGRP-S; Tag7; PGRP
Species:	Mouse
Source:	HEK293
Accession:	O88593 (F19-E182)
Gene ID:	21946
Molecular Weight:	Approximately 18 kDa

PROPERTIES

AA Sequence	F I V P R S E W R A L P S E C S S R L G H P V R Y V V I S H T A G S F C N S P D S C E Q Q A R N V Q H Y H K N E L G W C D V A Y N F L I G E D G H V Y E G R G W N I K G D H T G P I W N P M S I G I T F M G N F M D R V P A K R A L R A A L N L L E C G V S R G F L R S N Y E V K G H R D V Q S T L S P G D Q L Y Q V I Q S W E H Y R E
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	PGLYRP1/PGRP-S, an innate immunity protein, serves multifaceted roles in antimicrobial and antitumor defense systems. Functioning as a pattern receptor, it binds to murein peptidoglycans (PGN) from Gram-positive bacteria, thereby exerting bactericidal activity. Additionally, it forms an equimolar complex with heat shock protein HSPA1A, triggering programmed cell death through apoptosis and necroptosis in tumor cell lines by activating the TNFR1 receptor. Collaborating with the Ca(2+)-binding protein S100A4, it acts as a chemoattractant that induces lymphocyte movement and activates lymphocytes to eliminate virus-infected and tumor cells. The induction of cytotoxicity on monocyte surfaces requires interaction with the TREM1 receptor. This protein exhibits a homodimeric structure linked by disulfide bonds and interacts intricately with

	HSPA1A and HSPBP1, modulating its cytotoxic activity. These versatile functions underscore the critical involvement of PGLYRP1/PGRP-S in immune response and defense mechanisms.

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