

## RPS13 Protein, Human (GST)

<b>Cat. No.:</b>	HY-P71683
<b>Synonyms:</b>	40S ribosomal protein S13; MGC102403; MGC118043; Ribosomal protein S13; RPS13
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P62277 (3R-151A)
<b>Gene ID:</b>	6207
<b>Molecular Weight:</b>	Approximately 44.0 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> RMHAPGKGLS   QSALPYRRSV   PTWLKLTSD   VKEQIYKLA KGLTPSQIGV   ILRDSHGVAQ   VRFVTGNKIL  RILKSKGLA DLPEDLYHLI   KKAVAVRKHL  ERNRKDKDAK  FRLILIESR HRLARYYKTK   RVLPPNWKYE  SSTASALVA           </pre>
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH <sub>2</sub> O.
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

<b>Background</b>	<p>CCDC47 functions as a critical component of the multi-pass translocon (MPT) complex, which plays a pivotal role in the insertion of multi-pass membrane proteins into the lipid bilayer of membranes. Acting downstream of the SEC61 complex, the MPT complex, comprising the PAT subcomplex with CCDC47, facilitates the insertion of subsequent transmembrane regions after the SEC61 complex initiates the process. The PAT subcomplex, in which CCDC47 is involved, shields highly polar regions in transmembrane domains from the non-polar membrane environment until they can be buried in the fully assembled protein. CCDC47 specifically occludes the lateral gate of the SEC61 complex within the PAT subcomplex. Beyond its role in membrane protein insertion, CCDC47 contributes to the regulation of calcium ion homeostasis in the endoplasmic reticulum (ER) and is essential for proper protein degradation via the ER-associated degradation (ERAD) pathway. Furthermore, CCDC47 is indispensable for maintaining ER organization during embryogenesis. As part of the PAT complex,</p>
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alongside WDR83OS/Asterix, CCDC47 collaborates within the larger MPT complex, which also includes the GEL and BOS subcomplexes. This complex interplay is crucial for efficient protein translocation and ER function. CCDC47 interacts with key proteins such as VCP, HSPA5, DERL1, DERL2, and SELENOS, further emphasizing its significance in cellular processes.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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