

RCVRN Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71778
Synonyms:	23kDa photoreceptor cell-specific protein; CAR; CAR protein; p26; Protein CAR; RCV1; RCVRN; Recoverin; S-modulin
Species:	Human
Source:	P. pastoris
Accession:	P35243 (2G-200A)
Gene ID:	5957
Molecular Weight:	Approximately 25.0 kDa

PROPERTIES

AA Sequence	<p>G N S K S G A L S K E I L E E L Q L N T K F S E E E L C S W Y Q S F L K D C P T</p> <p>G R I T Q Q Q F Q S I Y A K F F P D T D P K A Y A Q H V F R S F D S N L D G T L</p> <p>D F K E Y V I A L H M T T A G K T N Q K L E W A F S L Y D V D G N G T I S K N E</p> <p>V L E I V M A I F K M I T P E D V K L L P D D E N T P E K R A E K I W K Y F G K</p> <p>N D D D K L T E K E F I E G T L A N K E I L R L I Q F E P Q K V K E K M K N A</p>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
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	<p>RCVRN protein serves as a calcium sensor, intricately involved in regulating phototransduction in both cone and rod photoreceptor cells. It plays a crucial role in modulating the light sensitivity of cone photoreceptors, particularly in dark and dim conditions. In response to elevated Ca(2+) levels induced by low light, RCVRN extends the activation of RHO/rhodopsin in rod photoreceptor cells by binding to and inhibiting GRK1-mediated phosphorylation of RHO/rhodopsin. This protein contributes to scotopic vision, enhancing vision in low-light conditions by facilitating signal transfer between rod photoreceptors and rod bipolar cells. Moreover, RCVRN improves rod photoreceptor sensitivity in dim light, mediating responses that aid in the detection of changes and motion in bright light. Existing as a homodimer, RCVRN undergoes disulfide-linked dimerization, a process triggered by prolonged intense illumination. Additionally, RCVRN may form a</p>
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complex with RHO and GRK1 in a Ca(2+)-dependent manner, preventing the interaction between GRK1 and RHO.

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

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