

## Collectrin/TMEM27 Protein, Human (HEK293, Fc)

Cat. No.:	HY-P77246
Synonyms:	Collectrin; Transmembrane protein 27; CLTRN; TMEM27
Species:	Human
Source:	HEK293
Accession:	Q9HBJ8 (E15-P141)
Gene ID:	57393
Molecular Weight:	53-57 kDa

### PROPERTIES

AA Sequence	<pre> E L C Q P G A E N A   F K V R L S I R T A   L G D K A Y A W D T   N E E Y L F K A M V A F S M R K V P N R   E A T E I S H V L L   C N V T Q R V S F W   F V V T D P S K N H T L P A V E V Q S A   I R M N K N R I N N   A F F L N D Q T L E   F L K I P S T L A P P M D P S V P           </pre>
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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 <sub>2</sub> O. 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	<p>The Collectrin protein, also known as TMEM27, plays a pivotal role in amino acid transport by serving as a binding partner for amino acid transporters SLC6A18 and SLC6A19, thereby regulating their trafficking on the cell surface and influencing their amino acid transporter activity. It is proposed to contribute to the trafficking of amino acid transporters SLC3A1 and SLC7A9 to the renal cortical cell membrane. Additionally, Collectrin acts as a regulator of SNARE complex function and functions as a stimulator of beta cell replication. Structurally, Collectrin exists both as a monomer and a homodimer, with the dimerization preventing CLTRN cleavage by BACE2. In terms of molecular interactions, Collectrin interacts with SLC6A18 and SLC6A19, intricately regulating their membrane trafficking and amino acid transporter activities, while also forming an interaction with SNAPIN. These findings underscore Collectrin's multifaceted involvement in amino acid transport and</p>
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cellular processes, highlighting its crucial role in maintaining proper cellular function.

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

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