

Aquaporin-1/AQP1 Protein, Human (Cell-Free, His-SUMO)

Cat. No.:	HY-P700377
Synonyms:	AQP CHIP; AQP-1; AQP1; AQP1_HUMAN; aquaporin 1 channel-forming integral protein; 28kDa; CO blood group; ; aquaporin 1 Colton blood group; ; Aquaporin CHIP; Aquaporin-1; Aquaporin-CHIP; Aquaporin1; Channel forming integral protein 28kDa; Channel like integral membrane protein 28 kDa; CHIP 28; CHIP28; CO; Colton blood group; Growth factor induced delayed early response protein; MGC26324; Urine water channel; Water channel protein CHIP 29; Water channel protein CHIP29; Water channel protein for red blood cells and kidney proximal tubule
Species:	Human
Source:	E. coli Cell-free
Accession:	P29972 (A2-K269)
Gene ID:	358
Molecular Weight:	41.3 kDa

PROPERTIES

AA Sequence	<pre> A S E F K K K L F W R A V V A E F L A T T L F V F I S I G S A L G F K Y P V G N N Q T A V Q D N V K V S L A F G L S I A T L A Q S V G H I S G A H L N P A V T L G L L L S C Q I S I F R A L M Y I I A Q C V G A I V A T A I L S G I T S S L T G N S L G R N D L A D G V N S G Q G L G I E I I G T L Q L V L C V L A T T D R R R R D L G G S A P L A I G L S V A L G H L L A I D Y T G C G I N P A R S F G S A V I T H N F S N H W I F W V G P F I G G A L A V L I Y D F I L A P R S S D L T D R V K V W T S G Q V E E Y D L D A D D I N S R V E M K P K </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
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	AQP1, a water-specific channel, plays a pivotal role in enhancing the permeability of plasma membranes in red blood cells and kidney proximal tubules, allowing water movement along osmotic gradients. It forms homotetramers and is a key component of the ankyrin-1 complex, a multiprotein assembly crucial for maintaining the stability and shape of erythrocyte
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membranes. In the erythrocyte, the ankyrin-1 complex consists of AQP1 along with ANK1, RHCE, RHAG, SLC4A1, EPB42, GYPA, and GYPB. AQP1's functional versatility is further highlighted by its interaction with EPHB2, contributing to endolymph production in the inner ear. Additionally, AQP1 participates in complexes involving STOM. The protein establishes interactions both via its N-terminal region with ANK1 and via its C-terminal region with EPB42, emphasizing its engagement in various cellular processes and protein assemblies.

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

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