

CLDN1 Protein, Human (Cell-Free, His)

Cat. No.:	HY-P702245
Synonyms:	Claudin-1; Senescence-associated epithelial membrane protein
Species:	Human
Source:	E. coli Cell-free
Accession:	O95832 (M1-V211)
Gene ID:	9076
Molecular Weight:	24.2 kDa

PROPERTIES

AA Sequence	<p> M A N A G L Q L L G F I L A F L G W I G A I V S T A L P Q W R I Y S Y A G D N I V T A Q A M Y E G L W M S C V S Q S T G Q I Q C K V F D S L L N L S S T L Q A T R A L M V V G I L L G V I A I F V A T V G M K C M K C L E D D E V Q K M R M A V I G G A I F L L A G L A I L V A T A W Y G N R I V Q E F Y D P M T P V N A R Y E F G Q A L F T G W A A A S L C L L G G A L L C C S C P R K T T S Y P T P R P Y P K P A P S S G K D Y V </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 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. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
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>CLDN1 protein, a member of the claudin family, plays a crucial role as a major constituent of tight junction complexes that regulate the permeability of epithelial barriers. While certain claudin family members contribute to the formation of impermeable barriers, others modulate the permeability to ions and small molecules. The interaction among various claudin family members, often coexpressed, determines the overall permeability of tight junctions. CLDN1 is specifically essential in preventing the paracellular diffusion of small molecules through tight junctions in the epidermis, crucial for</p>
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maintaining the normal barrier function of the skin and ensuring water homeostasis. Interestingly, while CLDN1 appears dispensable for water barrier formation in keratinocyte tight junctions, it indirectly influences water loss, potentially through the regulation of other protein expression levels. Moreover, CLDN1 acts as a co-receptor for hepatitis C virus (HCV) in hepatocytes, forming a receptor complex with CD81 that is vital for HCV entry into host cells, and it also functions as a receptor for dengue virus. These diverse roles underscore the significance of CLDN1 in both physiological barrier functions and viral infection processes.

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

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