MEC/CCL28 Protein, Human (His)

Cat. No.:	HY-P75447
Synonyms:	C-C motif chemokine 28; SCYA28; CCK1
Species:	Human
Source:	E. coli
Accession:	Q9NRJ3 (I23-Y127)
Gene ID:	56477
Molecular Weight:	Approximately 19 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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	CCL28, also known as mucosal associated epithelial chemokine (MEC), CCK1, and SCYA28, is a chemokine. It is expressed in various mucosal sites, including salivary glands and mammary glands, trachea and colon, and small intestine. CCL28 has been classified as an important component chemokine in homeostasis lymphocyte transport and can bind to CCR3 and CCR10. Among them, CCL28 can chemotactic CCR10 expression of CD4 and CD8 T cell populations, as well as CCR3 expression of eosinophils migration. However, in the intestinal mucosa, few T cells express CCR10. In contrast, in the B-cell population, CCR10 can be selectively expressed by IgA plasma mother cells and IgA-secreting cells (i.e. plasma cells), which play a key role in homing plasma mother cells to extraintestinal effector sites[1]. CCL28 is constitutively expressed in the colon, but its levels can be increased by pro-inflammatory cytokines and certain bacterial products that play a role in effector cell recruitment to sites of epithelial injury.CCL28 can act as a unifying immunostimulant on the mucosal surface and is involved in the migration of IgA-expressing cells to the breast, salivary glands, intestine, and other mucosal tissues. In addition, CCL28 exhibits broad-spectrum antimicrobial activity against Gram-negative and Gram-positive bacteria as well as fungi, such as Pseudomonas aeruginosa and Klebsiella pneumoniae. Further studies also showed that the positively charged amino acids at the C-terminal end of CCL28 significantly contributed to the antibacterial activity of the protein, and its characteristic hydrophobicity and amphiphilicity also contributed to its killing activity[2].

REFERENCES

[1]. Hiroyuki Ogawa, et al. Regulated production of the chemokine CCL28 in human colon epithelium. Am J Physiol Gastrointest Liver Physiol. 2004 Nov;287(5):G1062-9.

[2]. Teena Mohan, et al. CCL28 chemokine: An anchoring point bridging innate and adaptive immunity. Int Immunopharmacol. 2017 Oct;51:165-170.

[3]. Chan Sun, et al. Chemokine CCL28 induces apoptosis of decidual stromal cells via binding CCR3/CCR10 in human spontaneous abortion. Mol Hum Reprod. 2013 Oct;19(10):676-86.

[4]. Malin Hansson, et al. CCL28 is increased in human Helicobacter pylori-induced gastritis and mediates recruitment of gastric immunoglobulin A-secreting cells. Infect Immun. 2008 Jul;76(7):3304-11.

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