Human Defensin / Beta-defensin 3 / DEFB103 Protein (His Tag)

Catalog Number: **10849-H07E**

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General Information

Gene Name Synonym:

BD-3; DEFB-3; DEFB103; DEFB3; hBD-3; HBD3; HBP-3; HBP3

Protein Construction:

A DNA sequence encoding the mature form of human DEFB103A (P81534) (Gly 23-Lys 67) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 99 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant human DEFB103A consists of 61 amino acids and predicts a molecular mass of 7.3 KDa. It migrates as an approximately 12 KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 0.3% Ttiton X-100, 0.3% SKL, pH 8.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

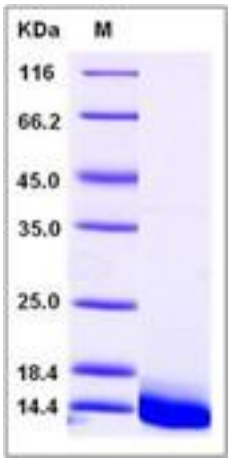
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Beta-defensin 3 is a member of the defensin family. Defensin family is comprised by microbicidal and cytotoxic peptides made by neutrophils. Members of the beta-defensin 3 family are highly similar in protein sequence. Beta-defensin 3 shows antimicrobial activity against Gram-positive bacteria S.aureus and S.pyogenes, Gram-negative bacteria P.aeruginosa and E.coli and the yeast C.albicans. Beta-defensin 3 is abundantly expressed in skin and tonsils, and to a lesser extent in trachea, uterus, kidney, thymus, adenoid, pharynx and tongue. It is also expressed in salivary gland, bone marrow, colon, stomach, polyp and larynx. However, in small intestine, it cannot be detected. Defensin has broad spectrum antimicrobial activity and may play an important role in innate epithelial defense. Beta-defensin 3 kills multiresistant S.aureus and vancomycin-resistent E.faecium. It has no significant hemolytic activity.

References

1.Garca JR, *et al*. (2002) Identification of a novel, multifunctional beta-defensin (human beta-defensin 3) with specific antimicrobial activity. Its interaction with plasma membranes of Xenopus oocytes and the induction of macrophage chemoattraction. Cell Tissue Res. 306(2):257-64.
2.Dunsche A, *et al*. (2002) The novel human beta-defensin-3 is widely expressed in oral tissues. Eur J Oral Sci. 110(2):121-4.
3.Abiko Y, *et al*. (2004) Upregulated expression of human beta defensin-1 and -3 mRNA during differentiation of keratinocyte immortalized cell lines, HaCaT and PHK16-0b. J Dermatol Sci. 31(3): 225-8.