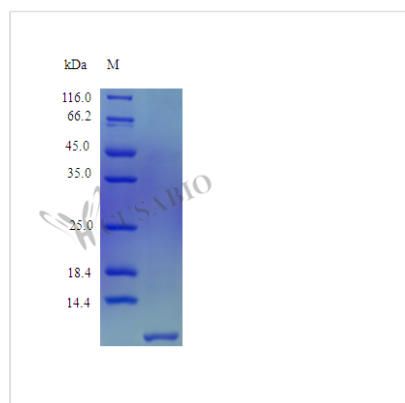




Recombinant Human Beta-defensin 4A protein (DEFB4A) (Active)

Product Code	CSB-AP003041HU
Abbreviation	Recombinant Human DEFB4A protein (Active)
Uniprot No.	O15263
Form	Lyophilized powder
Storage Buffer	Lyophilized from a 0.2 µm filtered 20 mM PB, pH 7.4, 130 mM NaCl
Product Type	Other
Immunogen Species	Homo sapiens (Human)
Biological Activity	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using immature human dendritic cells is in a concentration range of 10-100 ng/ml.
Purity	>98% as determined by SDS-PAGE.
Sequence	GIGDPVTCLK SGAICHPVFC PRRYKQIGTC GLPGTKCCKK P
Research Area	Microbiology
Source	E.coli
Target Names	DEFB4A
Expression Region	24-64aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag-Free
Mol. Weight	4.3 kDa
Protein Length	Full Length of Mature Protein
PubMed ID	9202117; 9831658; 10603376; 10837369; 15489334; 12010514; 10906336; 11714914

Image





Description

This Recombinant Human DEFB4A protein serves as an essential tool for investigators in the field of microbiology. The Defensin beta 4A, also known as DEFB4A, is expressed in *E. coli*, featuring the 24-64aa expression region of the full-length mature protein. The tag-free protein is provided as a lyophilized powder, allowing for straightforward reconstitution with sterile water or buffer to facilitate a wide range of experimental applications.

With a commitment to quality and performance, our Recombinant Human DEFB4A protein exhibits a purity of >98% as determined by SDS-PAGE and HPLC analysis. Furthermore, endotoxin levels are maintained below 1.0 EU/μg, as assessed by the LAL method. The protein demonstrates full biological activity in a chemotaxis bioassay using immature human dendritic cells, with an effective concentration range of 10-100 ng/ml.

Human DEFB4A has been the focus of numerous studies due to its role in host defense and antibacterial properties. Semple *et al.* (2010)^[1] and Harder *et al.* (2007)^[2] reported on the antimicrobial and immunomodulatory functions of DEFB4A. In addition, Hancock *et al.* (2016)^[3] discussed its potential as a therapeutic agent for the treatment of infectious diseases. These studies highlight the importance of DEFB4A in the innate immune system and its potential as a therapeutic target.

References:

1. Semple F, *et al.* Beta-defensins: multifunctional modulators of infection, inflammation and more? *J Innate Immun.* 2010;4(4):337-48.
2. Harder J, *et al.* An update on human defensins. *Arch Immunol Ther Exp (Warsz).* 2007;55(2):85-98.
3. Hancock REW, *et al.* The immunology of host defence peptides: beyond antimicrobial activity. *Nat Rev Immunol.* 2016;16(5):321-34.

Endotoxin

Less than 1.0 EU/μg as determined by LAL method.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.