

## DEFB4A Protein, Human, Recombinant

### General Information

Synonyms:	DEFB4;DEFB4A;hBD-2;Beta-Defensin 2;Skin-Antimicrobial Peptide 1;β-Defensin 4A;SAP1;β-Defensin 2;BD-2;DEFB4B;DEFB2;DEFB102;Beta 2;Defensin;Beta-Defensin 4A;β2
Protein Construction:	Gly24-Pro64
Species:	Human
Expression Host:	E. coli
Accession:	O15263
Molecular Weight:	9 KDa (reducing condition)
AA Sequence:	Gly24-Pro64

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

β-Defensin 4A is a membrane-active cationic peptide that functions in inflammation and innate immune responses. There are at least 30 β-Defensins, which are distinguished from α-Defensins by the connectivity pattern of their three intermolecular disulfide bonds. Members of the Defensin family are highly similar in protein sequence. This gene encodes Defensin, DEFB4;, which has broad-spectrum antimicrobial activity and may play an important role in innate epithelial defense. They are highly expressed in skin and tonsils, and to a lesser extent in

trachea, uterus, kidney, thymus, adenoid, pharynx and tongue.  $\beta$ -Defensin 4A has low expression in salivary gland, bone marrow, colon, stomach, polyp and larynx. No expression in small intestine. The 45 amino acid mature human BD3 shares 38% and 33% amino acid sequence identity with mouse and rat BD3, respectively.

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