



# Recombinant Protein Technical Manual

## Recombinant Human $\beta$ -Defensin 4A/DEFB4A Protein

RPES3528

### Product Data:

**Product SKU:** RPES3528

**Size:** 10 $\mu$ g

**Species:** Human

**Expression host:** E. coli

**Uniprot:** O15263

### Protein Information:

**Molecular Mass:** 4.3 kDa

**AP Molecular Mass:** 9 kDa

**Tag:**

**Bio-activity:**

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per  $\mu$ g as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2  $\mu$ m filtered solution of 20mM PB, 130mM NaCl, pH 7.4.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Beta-Defensin 4A; Beta-Defensin 2; BD-2; hBD-2; Defensin; Beta 2; Skin-Antimicrobial Peptide 1; SAP1; DEFB4A; DEFB102; DEFB2; DEFB4; DEFB4B

## Immunogen Information:

**Sequence:** Gly24-Pro64

## Background:

$\beta$ -Defensin 4A is a membrane-active cationic peptide that functions in inflammation and innate immune responses. There are at least 30  $\beta$ -Defensins, which are distinguished from  $\alpha$ -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.