ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Beta-Defensin 2 Antibodies

□ Cat. # HBD21-P	Beta defensin-2 (HBD-2) Control Peptides	**SIZE**: 100 ug
□ Cat. # HBD21-S	Rabbit Anti-HBD-2 antiserum	**SIZE**: 100 ul
□ Cat. # HBD21-A	Rabbit Anti-HBD-2 IgG (aff pure)	**SIZE**: 100 ug

Antimicrobial peptides are a common mechanism of host defense utilized by a variety of species, from insects to humans. Defensins are a large family of broad-spectrum antimicrobial peptides, identified originally in leukocytes of rabbits and humans. **Defensins**, cationic/polar peptides (30-35 aa; 3-4 kDa), are distinguished by a conserved tri-disulfides and a largely β-Sheet structure. Defensins, expressed at the cell surface, have been hypothesized to function as a biochemical barrier against microbial infection by inhibiting colonization of the epithelium by wide range of pathogenic microorganisms.

The genes encoding human **α and β -defensins** are clustered in a contiguous segment of chromosome 8p23. Defensins are classified into two families designated α – and β - based on distinctive, although similar, tri-disulfide linkages in the peptides. **β**-defensins are slightly larger and differ in the position and arrangement of 3 disulfides. In humans, six α –defensin (**cryptidins**), **HD 1-6** (HD1-4 are also known as **HNP1-4** for Human Neutrophil Peptides), and two β -defensins, **HBD-1 and HBD-2**, have been identified to date. Rat (**RBD-1 and RBD-2**) and mouse (**MBD1-4**) homologues of the human beta-defensin have also been identified.

Source of Antigen and Antibodies

Antigen	3 different **peptides** (14 aa from human BD-2, 14-aa from rat defensin-2, and 17 aa from mouse BD-2 (the mixture designated as designated HBD21-P; **control peptides**) Epitope location ~ near the N-terminus of mature BD-2 conjugated to KLH
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#HBD21-S) and IgG, purified over antigen-agarose (Cat # HBD21-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
□ 100ul □ solution □ lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
□ 100 ug/100ul □ solution □ lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
□ 100 ug/100 ul □ solution □ lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.
Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested

Specificity & Cross-reactivity

The beta-defensin-2 peptides selected for antibody production have no significant sequence homology with other defensins. Antibody HBD21 reacts with HBD-2 from mouse, rat, and human beta defensin-2. Antibody cross-reactivity in various other species has not been studied. The HBD21-P control peptide is available for antibody blocking to confirm specificity of antibodies. **Full length 41-aa HBD-2** (cat # HBD22-P) is also available to study HBD-2.

General References: Harder J (1997) Nature 387, 861; Diamond J. (2000) Infect. Immun. 68, 113; Morrision GM (1999) FEBS lett. 442, 112; liu L (1998) Gene 222, 237; Bartels J (1997) Nature 387, 861; Ganz T (1999) Science 286, 420; Yang D (1999) Science 286, 525.

(2) Citations of ADI's Antibodies (see web site for updated list)

Wang T-T, 2004, J. Immunol., 173: 2909 – 2912, IHC
Fahlgren A, 2003, Clin. Exp. Immunol. 131:90-101, IHC
Kao C-Y, 2004, J. Immunol.,173: 3482 – 3491,
Wade KB, 2004, Microbes and Infection 6, 51-57, IHC
Supp DM, 2004 Burns 30, 643-649, IHC
Zariffard MR, 2004, Clin. Immunol. 111, 103-107, WB

*This product is for In vitro research use only.

Related material available from ADI

Antibodies alpha and beta-defensins and MMP7

HBD21-S-A-P 71215S

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