

Product Specification Sheet

Human Beta-Defensin 1 (HBD-1/BD-1) Protein Antibodies

Cat. # HBD14-A

Rabbit Anti-Human BD-1 protein (full length) IgG (affinity 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. α -defensins are encoded by genes designated DEFA1-6, whereas human β -defensins are encoded by the DEFB1 and DEFB2 genes.

FUNCTION: Has bactericidal activity (By similarity).

SUBCELLULAR LOCATION: Secreted.

TISSUE SPECIFICITY: Plasma.

MASS SPECTROMETRY: MW=3928; MW_ERR=0.5; METHOD=Electrospray; RANGE=33-68; NOTE=Ref.5.

SIMILARITY: Belongs to the beta-defensin family.

Protein name Beta-defensin 1 [Precursor]

Synonyms BD-1, Defensin, beta 1, hBD-1 BD1, HBD1

Gene name Name: DEFB1

Source of Antigen and Antibodies

Antigen	Recombinant purified human BD-1 (protein accession # P60022) full length protein (cat #HBD17-R-10)
Ab Host/type	Rabbit, Polyclonal IgG, purified over antigen-agarose (Cat # HBD14-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100ul solution lyophilized powder

Supplied in **Buffer:** PBS, pH 7.4 @ ~1 mg/ml

Reconstitute powder in PBS at 1 mg/ml

Storage

Short-term: unopened, undiluted liquid vials at -200C and powder at 4oC or -20oC..

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

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-3 ug/ml for affinity pure antibody using ECL technique) using native or denatured protein.

ELISA: Recombinant BD-1 protein can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ul/ml for affinity pure). the antibody

Histochemistry & Immunofluorescence: see refs 2.

Specificity & Cross-reactivity

Anti-BD-1 reacts with human BD-1. Antibody cross-reactivity in various species has not been studied. Recombinant human BD-1 protein #HBD17-R-10 can be as control protein for ELISA or Western. Antibodies to mouse BD-1 are also available.

General References: (1)..Huttner Km (1997) FEBS Lett. 413, 45-69; Liu L (1997) Genomics 43, 316-320; McCray PB (1997) Am, J. Respir. Cell. Mol. Biol. 16, 343-349; Bensch KW (1995) FEBS Lett. 368, 331-335; 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)

Wade KB 2004 Microbes and Infection 6, 51-57, IHC

Supp DM 2004 Burns 30, 643-649, IHC

*This product is for In vitro research use only.

Related material available from ADI

Antibodies alpha and beta-defensins 1-4 and MMP7

Human BD-1, BD-2, BD-3 and NP-1 ELISA kits

HBD14-A

70827A

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