

Human BD-4 ELISA Kit | BD-4 elisa kit

BD-4 (Human) OmniKine ELISA Kit

CATALOG #
AAA315597

REACTIVITY
Human

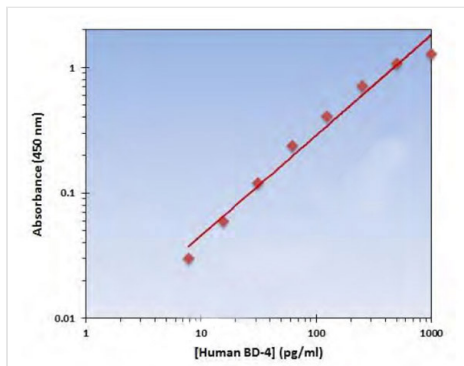
PRODUCT SYNONYMS

BD-4; BD-4 (Human) OmniKine ELISA Kit; HBD-4; DEFB-4; HBD4; DEFB104B; Beta-defensin 4; BD-4 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	The OmniKine™ Human BD-4 ELISA is capable of recognizing both recombinant and naturally produced Human BD-4 proteins. The antigens listed below were tested at 50 ng/ml and did not exhibit significant cross reactivity or interference.
Form/Format	12 x 8-Well Microstrips
Sequence Length	72
Assay Type	Quantitative Sandwich
Preparation and Storage	Store entire kit at 4 degree C until use.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for BD-4 elisa kit	Principle of the Assay: The OmniKine™ Human BD-4 ELISA Kit contains the components necessary for quantitative determination of natural or recombinant Human BD-4 concentrations within any experimental sample including cell lysates, serum and plasma. This particular immunoassay utilizes the quantitative technique of a "Sandwich" Enzyme-Linked Immunosorbent Assay (ELISA) where the target protein (antigen) is bound in a "sandwich" format by the primary capture antibodies coated to each well-bottom and the secondary detection antibodies added subsequently by the investigator. The capture antibodies coated to the bottom of each well are specific for a particular epitope on Human BD-4 while the user-added detection antibodies bind to epitopes on the captured target protein. Amid each step of the procedure, a series of wash steps must be performed to ensure the elimination of non-specific binding between proteins to other proteins or to the solid phase. After incubation and "sandwiching" of the target antigen, a peroxidase enzyme is conjugated to the constant heavy chain of the secondary antibody (either covalently or via Avidin/Streptavidin-Biotin interactions), allowing for a colorimetric reaction to ensue upon substrate addition. When the substrate TMB (3, 3', 5, 5'-Tetramethylbenzidine) is added, the reaction catalyzed by peroxidase yields a blue color that is representative of the antigen concentration. Upon sufficient color development, the reaction can be terminated through addition of Stop Solution (2 N Sulfuric Acid) where the color of the solution will turn yellow. The absorbance of each well can then be read by a spectrophotometer, allowing for generation of a standard curve and subsequent determination of protein concentration. Background/Introduction: Human BD-4, also known as Beta-Defensin 4, is a 72 amino acid cytokine protein, encoded by the DEFB104AB gene, which is commonly known for its antimicrobial activity via synergistic effects with lysozymes and Beta-Defensin 3. The antimicrobial activity displayed by BD-4 is commonly dependent upon the sodium chloride concentration in the vicinity of the cell such that the antibiotic capability is decreased as NaCl concentration increases and vice versa. The BD-4 peptide undergoes proteolytic processing further into its mature form via cleavage of its 22 residue signal sequence, resulting in the mature 50 residue BD-4 cytokine. The mature forms of all 4 types of Beta-Defensin cytokines are distinguished from their Alpha-Defensin counterparts such that they contain the characteristic 6 cysteine structural motifs via 3 disulfide linkages. Generally, defensins form a family of microbicidal and cytotoxic peptides made by neutrophils. Moreover, members of the defensin family are highly similar in protein sequence. In terms of tissue specificity, Human BD-4 is highly expressed in male testes while expressed much less in the female uterus. Furthermore, the cytokine is highly prevalent on the plasma membranes of gastric antrum while lower in neutrophils, thyroid glands, lungs and kidneys. Aside from its antimicrobial functions, human Beta-Defensin 4 is attracted via chemical stimuli towards immature dendritic cells and memory T-cells.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	103485137
NCBI GeneID	503618
NCBI Accession #	NP_001035792.1
NCBI GenBank Nucleotide #	NM_001040702.1
UniProt Accession #	Q8WTQ1; Q496I2; Q496I3; Q496I4
Molecular Weight	8,526 Da
NCBI Official Full Name	beta-defensin 104
NCBI Official Synonym Full Names	defensin beta 104B
NCBI Official Symbol	DEFB104B
NCBI Official Synonym Symbols	BD-4; hBD-4; DEFB-4
NCBI Protein Information	beta-defensin 104
UniProt Protein Name	Beta-defensin 104
UniProt Gene Name	DEFB104A
UniProt Synonym Gene Names	DEFB104; DEFB4; BD-4; DEFB-4; hBD-4

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

