

β -defensin 1 (M4-14b-H4): sc-65501

BACKGROUND

β -defensins (also designated BD, and HBD in human) are small cationic peptides with broad-spectrum antimicrobial activity. β -defensins are involved in the resistance of epithelial surfaces, such as airway surface fluid, to microbial colonization. Produced in mucosal epithelia and neutrophils of several species, β -defensins are developmentally regulated. Human β -defensin 1 shares homology with other β -defensins from human blood filtrate and is also present in nanomolar concentrations in human plasma. In addition to the antimicrobial activity of human airway epithelia, β -defensin 1 may play a role in the mucosal defenses of the lung.

REFERENCES

1. Benesch, K.W., et al. 1995. hBD-1: a novel β -defensin from human plasma. *FEBS Lett.* 368: 331-335.
2. McCray, P.B., Jr., et al. 1997. Human airway epithelia express a β -defensin. *Am. J. Respir. Cell Mol. Biol.* 16: 343-349.
3. Liu, L., et al. 1997. The human β -defensin-1 and α -defensins are encoded by adjacent genes: two peptide families with differing disulfide topology share a common ancestry. *Genomics* 43: 316-320.
4. Morrison, G.M., et al. 1998. Mouse β -defensin 1 is a functional homolog of human β -defensin 1. *Mamm. Genome* 9: 453-457.
5. Bals, R., et al. 1999. Mouse β -defensin 3 is an inducible antibacterial peptide expressed in the epithelia of multiple genes. *Infect. Immun.* 67: 3542-3547.
6. Yang, D., et al. 1999. β -defensins: linking innate and adaptive immunity through dendritic and T cell CCR6. *Science* 286: 525-528.

CHROMOSOMAL LOCATION

Genetic locus: DEFB1 (human) mapping to 8p23.1.

SOURCE

β -defensin 1 (M4-14b-H4) is a mouse monoclonal antibody raised against a synthetic peptide mapping to amino acids 1-36 of β -defensin 1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β -defensin 1 (M4-14b-H4) is recommended for detection of β -defensin 1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β -defensin 1 siRNA (h): sc-43720, β -defensin 1 shRNA Plasmid (h): sc-43720-SH and β -defensin 1 shRNA (h) Lentiviral Particles: sc-43720-V.

Molecular Weight of β -defensin 1: 7 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.