

β-defensin 1 (M-69): sc-25573

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, isolated from the kidney, 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. 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.
5. Yang, D., et al. 1999. β-defensins: linking innate and adaptive immunity through Dendritic and T cell CCR-6. *Science* 286: 525-528.

CHROMOSOMAL LOCATION

Genetic locus: Defb1 (mouse) mapping to 8 A2.

SOURCE

β-defensin 1 (M-69) is a rabbit polyclonal antibody raised against amino acids 1-69 representing full length β-defensin 1 of mouse origin.

PRODUCT

Each vial contains 200 μg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

β-defensin 1 (M-69) is recommended for detection of β-defensin 1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 (m): sc-40480, β-defensin 1 shRNA Plasmid (m): sc-40480-SH and β-defensin 1 shRNA (m) Lentiviral Particles: sc-40480-V.

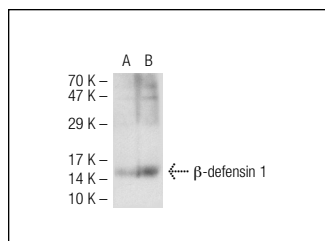
Molecular Weight of β-defensin 1: 3.9 kDa.

Positive Controls: β-defensin 1 (m): 293T Lysate: sc-119734.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



β-defensin 1 (M-69): sc-25573. Western blot analysis of β-defensin 1 expression in non-transfected: sc-117752 (A) and mouse β-defensin 1 transfected: sc-119734 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ahrens, K., et al. 2011. Mechanical and metabolic injury to the skin barrier leads to increased expression of murine β-defensin-1, -3, and -14. *J. Invest. Dermatol.* 131: 443-452.
2. Alan, E. and Liman, N. 2012. Immunohistochemical localization of β defensins in the endometrium of rat uterus during the postpartum involution period. *Vet. Res. Commun.* 36: 173-185.

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 or our catalog for detailed protocols and support products.