

β-defensin 1 (FL-68): sc-20797

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.

CHROMOSOMAL LOCATION

Genetic locus: DEF1 (human) mapping to 8p23.1.

SOURCE

β-defensin 1 (FL-68) is a rabbit polyclonal antibody raised against amino acids 1-68 representing full length β-defensin 1 of human origin.

PRODUCT

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

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.

APPLICATIONS

β-defensin 1 (FL-68) is recommended for detection of β-defensin 1 of human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

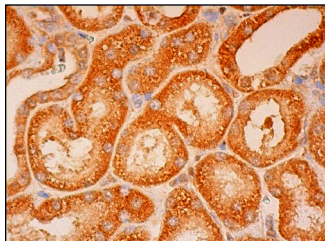
Suitable for use as control antibody for β-defensin 1 siRNA (h): sc-43720, β-defensin 1 shRNA Plasmid (h): sc-43720-SH and β-defensin 1 shRNA (h) Lentiviral Particles: sc-43720-V.

Molecular Weight of β-defensin 1: 7 kDa.

STORAGE

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

DATA



β-defensin 1 (FL-68): sc-20797. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Malik, A.N., et al. 2007. Glucose regulation of β-defensin 1 mRNA in human renal cells. *Biochem. Biophys. Res. Commun.* 353: 318-323.
2. Chakraborty, K., et al. 2008. Bacterial exotoxins downregulate cathelicidin (hCAP-18/LL-37) and human β-defensin 1 (HBD-1) expression in the intestinal epithelial cells. *Cell. Microbiol.* 10: 2520-2537.
3. Sperandio, B., et al. 2008. Virulent *Shigella flexneri* subverts the host innate immune response through manipulation of antimicrobial peptide gene expression. *J. Exp. Med.* 205: 1121-1132.
4. Kraus, D., et al. 2011. Human β-defensins differently affect proliferation, differentiation, and mineralization of osteoblast-like MG63 cells. *J. Cell. Physiol.* 227: 994-1003.
5. Kraemer, B.F., et al. 2011. Novel anti-bacterial activities of β-defensin 1 in human platelets: suppression of pathogen growth and signaling of neutrophil extracellular trap formation. *PLoS Pathog.* 7: e1002355.
6. Winter, J., et al. 2012. IGF-1 deficiency in combination with a low basic hBD-2 and hBD-3 gene expression might counteract malignant transformation in pleomorphic adenomas *in vitro*. *Cancer Invest.* 30: 106-113.
7. Muehleisen, B., et al. 2012. Distinct innate immune gene expression profiles in non-melanoma skin cancer of immunocompetent and immunosuppressed patients. *PLoS ONE* 7: e40754.

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Try **β-defensin 1 (M4-14b-H4): sc-65501**, our highly recommended monoclonal alternative to β-defensin 1 (FL-68).