



β-defensin 3 (M-48): sc-30116

BACKGROUND

β-defensins (also designated BD, and hBD in human) are small cationic peptides with broad-spectrum antimicrobial activity. Produced in mucosal epithelia and neutrophils of several species, β-defensins are developmentally regulated. Human β-defensin 2 is locally regulated by inflammation and is the first member of the β-defensin family that is locally inducible by inflammation. The murine homolog of human β-defensin 2, which is called β-defensin 3, is present in the respiratory system and in low levels in the epithelial cells of the intestine and lung. The unique murine β-defensin 2 (Defβ2) is not expressed in airways of untreated mice, but is upregulated in the airways by lipopolysaccharide and may contribute to host defense at the mucosal surface of the airways.

REFERENCES

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3. Liu, L., Wang, L., Jia, H.P., Zhao, C., Heng, H.H.Q., Schutte, B.C., McCray, P.B. Jr. and Ganz, T. 1998. Structure and mapping of the human β-defensin HBD-2 gene and its expression at sites of inflammation. *Gene* 222: 237-244.
4. Bals, R., Wang, X., Meegalla, R.L., Wattler, S., Weiner, D.J., Nehls, M.C. and Wilson, J.M. 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., Chertov, O., Bykovskaia, S.N., Chen, Q., Buffo, M.J., Shogan, J., Anderson, M., Schroder, J.M., Wang, J.M., Howard, O.M.Z. and Oppenheim, J.J. 1999. β-defensins: linking innate and adaptive immunity through dendritic and T cell CCR6. *Science* 286: 525-528.
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CHROMOSOMAL LOCATION

Genetic locus: Defb3 (mouse) mapping to 8 A1.3.

SOURCE

β-defensin 3 (M-48) is a rabbit polyclonal antibody raised against amino acids 16-63 of β-defensin 3 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.

STORAGE

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

APPLICATIONS

β-defensin 3 (M-48) is recommended for detection of β-defensin 3 of mouse 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 14 siRNA (m): sc-77381, β-defensin 14 shRNA Plasmid (m): sc-77381-SH and β-defensin 14 shRNA (m) Lentiviral Particles: sc-77381-V.

Molecular Weight of β-defensin 3: 5 kDa.

Positive Controls: mouse respiratory tissue.

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.

SELECT PRODUCT CITATIONS

1. Varoga, D., Varoga, D., Tohidnezhad, M., Paulsen, F., Wruck, C.J., Brandenburg, L., Mentlein, R., Lippross, S., Hassenpflug, J., Besch, L., Müller, M., Jürgens, C., Seekamp, A., Schmitt, L. and Pufe, T. 2008. The role of human β-defensin-2 in bone. *J. Anat.* 213: 749-757.

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.