

β-defensin 129 (S-15): sc-85541

BACKGROUND

β-defensins (also designated BDs, or hBDs in human) are small cationic peptides with broad-spectrum antimicrobial activity against a variety of enveloped viruses, fungi and bacteria. Produced in mucosal epithelia and neutrophils of several species, β-defensins are developmentally regulated. The family of β-defensin proteins share a common defensin-motif that is characterized by multiple cysteine residues and a highly conserved tertiary structure. Besides playing a significant role in host immune defense, many β-defensins also are involved in sperm maturation and capacitation. β-defensin 129 is a 183 amino acid secreted protein that most likely contains a signal peptide sequence that requires cleavage by proteolytic enzymes in order to become biologically active. With specific expression in testis, β-defensin 129 is upregulated in men with nonobstructive azoospermia.

REFERENCES

- Jia, H.P., et al. 1999. Molecular cloning and characterization of rat genes encoding homologues of human β-defensins. *Infect. Immun.* 67: 4827-4833.
- Jia, H.P., et al. 2001. Discovery of new human β-defensins using a genomics-based approach. *Gene* 263: 211-218.
- Schutte, B.C., et al. 2002. Discovery of five conserved β-defensin gene clusters using a computational search strategy. *Proc. Natl. Acad. Sci. USA* 99: 2129-2133.
- Kao, C.Y., et al. 2003. ORFeome-based search of airway epithelial cell-specific novel human β-defensin genes. *Am. J. Respir. Cell Mol. Biol.* 29: 71-80.
- Rodríguez-Jiménez, F.J., et al. 2003. Distribution of new human β-defensin genes clustered on chromosome 20 in functionally different segments of epididymis. *Genomics* 81: 175-183.
- Zhang, Z. and Henzel, W.J. 2004. Signal peptide prediction based on analysis of experimentally verified cleavage sites. *Protein Sci.* 13: 2819-2824.
- Crovella, S., et al. 2005. Primate β-defensins—structure, function and evolution. *Curr. Protein Pept. Sci.* 6: 7-21.
- Patil, A.A., et al. 2005. Cross-species analysis of the mammalian β-defensin gene family: presence of syntenic gene clusters and preferential expression in the male reproductive tract. *Physiol. Genomics* 23: 5-17.
- Dube, E., et al. 2008. Alterations in gene expression in the caput epididymides of nonobstructive azoospermic men. *Biol. Reprod.* 78: 342-351.

CHROMOSOMAL LOCATION

Genetic locus: DEFB129 (human) mapping to 20p13.

SOURCE

β-defensin 129 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of β-defensin 129 of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-85541 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β-defensin 129 (S-15) is recommended for detection of β-defensin 129 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

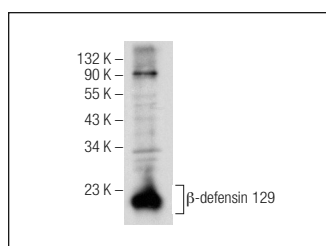
Suitable for use as control antibody for β-defensin 129 siRNA (h): sc-77126, β-defensin 129 shRNA Plasmid (h): sc-77126-SH and β-defensin 129 shRNA (h) Lentiviral Particles: sc-77126-V.

Molecular Weight of β-defensin 129: 20 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



β-defensin 129 (S-15): sc-85541. Western blot analysis of β-defensin 129 expression in rat epididymus tissue extract.

STORAGE

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

PROTOCOLS

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