

α -defensin 4 (H-51): sc-50344

BACKGROUND

Human neutrophil α -defensins (also designated HNPs) are small, cationic, cysteine-rich antimicrobial proteins that play important roles in innate immunity against infectious microbes such as bacteria, fungi and enveloped viruses. α -defensins are synthesized as inactive precursors and are activated by proteolytic cleavage by MMP-7. Paneth cells in small intestinal crypts secrete the α -defensins, which are also termed Cryptidins in mice. The Cryptidin 4 gene is unique among the Paneth cell α -defensins in that it is inactive in the duodenum, but expressed at maximal levels in the distal small bowel.

REFERENCES

- Ouellette, A.J., et al. 1999. Peptide localization and gene structure of Cryptidin 4, a differentially expressed mouse paneth cell α -defensin. *Infect. Immun.* 67: 6643-6651.
- Ayabe, T., et al. 2002. Activation of Paneth cell α -defensins in mouse small intestine. *J. Biol. Chem.* 277: 5219-5228.
- Wu, Z., et al. 2003. From pro defensins to defensins: synthesis and characterization of human neutrophil pro α -defensin 1 and its mature domain. *J. Pept. Res.* 62: 53-62.
- Maemoto, A., et al. 2004. Functional analysis of the α -defensin disulfide array in mouse Cryptidin 4. *J. Biol. Chem.* 279: 44188-44196.
- Nam, M.J., et al. 2004. Identification of α -defensin 6 as a potential biomarker in colon adenocarcinoma. *J. Biol. Chem.* 280: 8260-8265

CHROMOSOMAL LOCATION

Genetic locus: DEFA4 (human) mapping to 8p23.

SOURCE

α -defensin 4 (H-51) is a rabbit polyclonal antibody raised against amino acids 47-97 mapping at the C-terminus of α -defensin 4 of human origin.

PRODUCT

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

APPLICATIONS

α -defensin 4 (H-51) is recommended for detection of α -defensin 4 mature chain and precursor of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 α -defensin 4 siRNA (h): sc-60047, α -defensin 4 shRNA Plasmid (h): sc-60047-SH and α -defensin 4 shRNA (h) Lentiviral Particles: sc-60047-V.

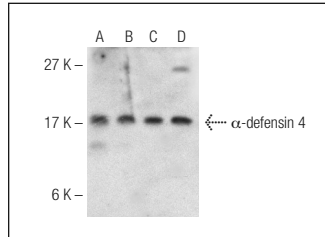
Molecular Weight of α -defensin 4: 11 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, ZR-75-1 cell lysate: sc-2241 or GA-10 whole cell lysate.

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



α -defensin 4 (H-51): sc-50344. Western blot analysis of α -defensin 4 expression in THP-1 (A), HT-1080 (B), ZR-75-1 (C) and GA-10 (D) whole cell lysates.

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.