

# HNP (N-14): sc-22915

## BACKGROUND

Defensins are a family of microbicidal and cytotoxic peptides which are made by neutrophils and are thought to be involved in host defense. Defensins are abundant in the granules of neutrophils and are also found in the epithelia of mucosal surfaces such as those of the intestine, respiratory tract, urinary tract and vagina. There are six  $\alpha$ -defensins, which are known as human neutrophil peptides (HNPs) in humans. HNP-1–4 are found in the microbicidal granules of neutrophils; HNP-5 and HNP-6 are located in Paneth cells of the intestinal tract. HNP-1 is found in the microbicidal granules of neutrophils and probably plays a role in phagocyte-mediated host defense. HNP-1, HNP-2 and HNP-3, which comprise about 30% of the total granule protein of the neutrophil, are secreted by most normal individuals. HNP-1 and HNP-2 are encoded by the  $\alpha$ 1-defensin (DEFA1) gene. HNP-3 is encoded by the  $\alpha$ 3-defensin (DEFA3) gene. Both genes map to human chromosome 8p23.1.

## REFERENCES

- Ouellette, A.J., et al. 1989. Localization of the cryptdin locus on mouse chromosome 8. *Genomics* 5: 233-239.
- Sparkes, R.S., et al. 1989. Assignment of defensin gene(s) to human chromosome 8p23. *Genomics* 5: 240-244.

## CHROMOSOMAL LOCATION

Genetic locus: DEFA1/DEFA3/DEFA1B (human) mapping to 8p23.1.

## SOURCE

HNP (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of HNP of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-22915 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

HNP (N-14) is recommended for detection of HNP-1/2 precursor, mature HNP-1 and HNP-2, HNP-3 and  $\alpha$ -defensin 1B of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

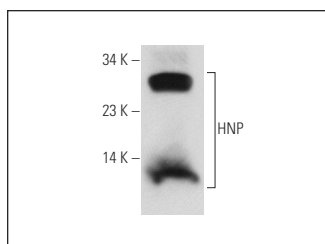
Molecular Weight of HNP: 3 kDa.

Positive Controls: human PBL whole cell lysate.

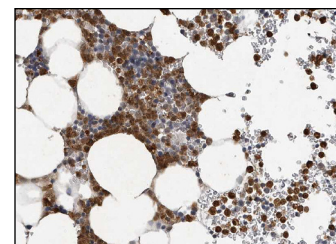
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



HNP (N-14): sc-22915. Western blot analysis of HNP expression in human PBL whole cell lysate.



HNP (N-14): sc-22915. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing nuclear and cytoplasmic staining of hematopoietic cells at high magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

## SELECT PRODUCT CITATIONS

- Winter, J., et al. 2012. Human  $\alpha$ -defensin (DEFA) gene expression helps to characterise benign and malignant salivary gland tumours. *BMC Cancer* 12: 465.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.



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Try **HNP (H-2): sc-390796**, our highly recommended monoclonal alternative to HNP (N-14).