SANTA CRUZ BIOTECHNOLOGY, INC.

# NAP-2 (T-17): sc-19224

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Members of the α-chemokine subfamily of inducible, secreted, pro-inflammatory cytokines contain a similar motif, in which the first two cysteine residues are separated by a single residue (Cys-X-Cys), and are also chemotactic for neutrophils. The platelet basic protein (PBP), a member of the α-chemokine family, resides in the a-granules of platelets and is released upon their activation. Proteolytic cleavage of the amino terminus of PBP leads to the generation of several peptides, which include mature PBP, connective tissue-activating peptide III (CTAP III, also designated low affinity platelet factor IV (LA-PF4)), β-thromboglobulin (β-TG), and neutrophil-activating peptide 2 (NAP-2). PBP and its N-truncated derivatives, all of which migrate between 8-10 kDa by SDS-PAGE, mediate inflammation and wound healing. Specifically, NAP-2 activates chemotaxis and degranulation in neutrophils during inflammation (1.6). The gene encoding human PBP maps to chromosome 4q12-q13.

## REFERENCES


1. Holt, J.C., et al. 1986. Characterization of human platelet basic protein, a precursor form of low-affinity platelet factor 4 and β-thromboglobulin. Biochemistry 25: 1988-1996.
2. Wenger, R.H., et al. 1991. Human platelet basic protein/connective tissue activating peptide-III maps in a gene cluster on chromosome 4q12-q13 along with other genes of the β-thromboglobulin superfamily. Hum. Genet. 87: 367-368.
3. Car, B.D., et al. 1991. Formation of neutrophil-activating peptide 2 from platelet-derived connective-tissue-activating peptide III by different tissue proteinases. Biochem. J. 275 ( Pt 3): 581-584.
4. Hoogewerf, A.J., et al. 1995. CXC chemokines connective tissue activating peptide-III and neutrophil activating peptide-2 are heparin/heparan sulfate-degrading enzymes. J. Biol. Chem. 270: 3268-3277.
5. Malkowski, M.G., et al. 1997. The amino-terminal residues in the crystal structure of connective tissue activating peptide-III (des10) block the ELR chemotactic sequence. J. Mol. Biol. 266: 367-380.
6. Proudfoot, A.E., et al. 1997. Structure and bioactivity of recombinant human CTAP-III and NAP-2. J. Protein Chem. 16: 37-49.
7. Ehlert, J.E., et al. 2000. Downregulation of neutrophil functions by the ELR+ CXC chemokine platelet basic protein. Blood 96: 2965-2972.


## SOURCE

NAP-2 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NAP-2 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.

Blocking peptide available for competition studies, sc-19224 P, (100 µg 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

NAP-2 (T-17) is recommended for detection of NAP-2, PBP, CTAP-III/LA-PF4, and β-thromboglobulin of human and 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).

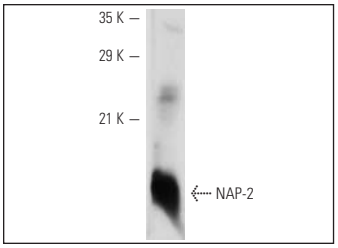
Molecular Weight of NAP-2: 14 kDa.

Positive Controls: human platelet extract.

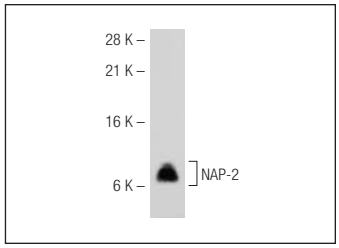
## RECOMMENDED SECONDARY REAGENTS

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




NAP-2 (T-17): sc-19224. Western blot analysis of NAP-2 expression in human platelet extract.




NAP-2 (T-17): sc-19224. Western blot analysis of NAP-2 expression in human platelet extract.

## SELECT PRODUCT CITATIONS


1. Kuusniemi, A.M., et al. 2005. Kidneys with heavy proteinuria show fibrosis, inflammation, and oxidative stress, but no tubular phenotypic change. Kidney Int. 68: 121-132.


## 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.