

NAP-2 (3H428): sc-71642

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 α -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 mediate inflammation and wound healing. Specifically, NAP-2 activates chemotaxis and degranulation in neutrophils during inflammation. The gene encoding human PBP maps to chromosome 4q13.3.

REFERENCES

- Holt, J.C., Harris, M.E., Holt, A.M., Lange, E., Henschen, A. and Niewiarowski, S. 1986. Characterization of human platelet basic protein, a precursor form of low-affinity platelet factor 4 and β -thromboglobulin. *Biochemistry* 25: 1988-1996.
- Car, B.D., Baggiolini, M. and Walz, A. 1991. Formation of neutrophil-activating peptide 2 from platelet-derived connective-tissue-activating peptide III by different tissue proteinases. *Biochem. J.* 275: 581-584.
- Wenger, R.H., Hameister, H. and Clemetson, K.J. 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.
- Hoogewerf, A.J., Leone, J.W., Reardon, I.M., Howe, W.J., Asa, D., Heinrikson, R.L. and Ledbetter, S.R. 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.
- Malkowski, M.G., Lazar, J.B., Johnson, P.H. and Edwards, B.F. 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.
- Proudfoot, A.E., Peitsch, M.C., Power, C.A., Allet, B., Mermod, J.J., Bacon, K. and Wells, T.N. 1997. Structure and bioactivity of recombinant human CTAP-III and NAP-2. *J. Protein Chem.* 16: 37-49.
- Ehlert, J.E., Ludwig, A., Grimm, T.A., Lindner, B., Flad, H.D. and Brandt, E. 2000. Down-regulation of neutrophil functions by the ELR⁺ CXC chemokine platelet basic protein. *Blood* 96: 2965-2972.

CHROMOSOMAL LOCATION

Genetic locus: PPBP (human) mapping to 4q13.3.

SOURCE

NAP-2 (3H428) is a mouse monoclonal antibody raised against recombinant NAP-2 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

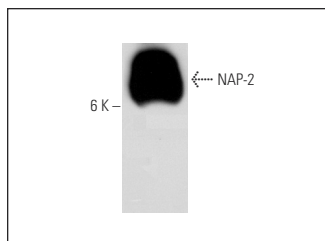
NAP-2 (3H428) is recommended for detection of NAP-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Multimerin-2 siRNA (h): sc-75844; and as shRNA Plasmid control antibody for Multimerin-2 shRNA Plasmid (h): sc-75844-SH.

Molecular Weight of NAP-2: 14 kDa.

Positive Controls: human platelet extract: sc-363773.

DATA



NAP-2 (3H428): sc-71642. Western blot analysis of NAP-2 expression in human platelet whole cell lysate.

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 for detailed protocols and support products.