SPECIFICATION SHEET
Rev 082708A

Neutrophil Activating Peptide 2

Human, Recombinant (rHuNAP-2/CXCL7)

Expressed in *E. coli*
Cat. No. CRP08108
Lot. No. (See product label)

PDB rendering based on 1f9p
Available structures: 1f9p, 1nap, 1tvx

PRODUCT INFORMATION

Description: Neutrophil Activating Peptide 2 (NAP-2) is proteolytically processed carboxyl-terminal fragments of platelet basic protein (PBP) which is found in the alpha-granules of human platelets. NAP-2 is a member of the CXC chemokines. Similar to other ELR domain containing CXC chemokines such as IL-8 and the GRO proteins, NAP-2 has been shown to bind CXCR-2 and to chemoattract and activate neutrophils. Although CTAP-III, β-TG and PBP represent amino-terminal extended variants of NAP-2 and possess the same CXC chemokine domains, these proteins do not exhibit NAP-2 activity. Recently, it has been shown that the additional amino-terminal residues of CTAP-III masks the critical ELR receptor binding domain that is exposed on NAP-2 and may account for lack of NAP-2 activity.

Amino-Acid Sequence: 70 aa, non-glycosylated

M. W. : 7.6 kDa

Recombinant: Expressed in *E. coli*

Purity: >97% by SDS-PAGE and HPLC analyses.

Formulation: Lyophilized from a 0.2mm filtered concentrated (1.0mg/ml) solution in 20mM PB, pH 7.4, 50mM NaCl.

Specific Activity: Fully biologically active when compared to standard. Determined by its ability to chemoattract human neutrophils using a concentration range of 1.0-10.0 ng/ml.

Endotoxin: Less than 1EU/mg of rHuNAP-2/CXCL7 as determined by LAL method.

Reconstitution: Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/ml. Stock solutions should be apportioned into working aliquots and stored at ≤-20°C. Further dilutions should be made in appropriate buffered solutions.

Storage: This lyophilized preparation is stable for several weeks at 2-8°C, but should be kept at -20°C for long term storage, preferably desiccated. Upon reconstitution, the preparation is stable for up to one week at 2-8°C. For maximal stability, apportion the reconstituted preparation into working aliquots and store at -20°C to -70°C. Avoid repeated freeze/thaw cycles.

FOR RESEARCH USE ONLY

GENE INFORMATION

Gene Name: PPBP
Synonyms: PBP; TC1; TC2; TGB; LDGF; MDGF; TGB1; B-TG1; CTAP3; CXCL7; NAP-2; SCYB7; THBGB; LA-PF4; THBGB1; Beta-TG; CTAPIII; NAP-2-L1; TGB1;SCYB7; CXCL7_HUMAN; Platelet basic protein [Precursor]; C-X-C motif chemokine 7;Small-inducible cytokine B7;Leukocyte-derived growth factor;LDGF;Macrophage-derived growth factor;MDGF.
UniProt ID: P02775
mRNA Refseq: NM_002704
Protein Refseq: NP_002695
MIM: 121010
GeneID: 5473
Chromosome Location: 4q12-q13
Pathway: Cytokine-cytokine receptor interaction;Leukocyte transendothelial migration;Hemostasis.
Function: chemokine activity;glucose transmembrane transporter activity;growth factor activity.

REFERENCES

1.Castor C, Miller J, Walz D (1983).Structural and biological characteristics of connective tissue activating peptide (CTAP-III), a major human platelet-derived growth factor. Proc Natl Acad Sci U S A 80 (3): 765–9.

2.Castor C, Furlong A, Carter-Su C (1985). Connective tissue activation: stimulation of glucose transport by connective tissue activating peptide III. Biochemistry 24 (7): 1762–7.

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