OriGene Technologies Inc.

9620 Medical Center Drive, Ste 200
Rockville, MD 20850
UNITED STATES
Phone: +1-858-888-7900
Fax: +1-858-888-7904
US-info@acris-antibodies.com

OriGene EU

Acris Antibodies GmbH
Schillerstr. 5
32052 Herford
GERMANY
Phone: +49-5221-34606-0
Fax: +49-5221-34606-11
info@acris-antibodies.com

Recombinant Human Neutrophil Activating Protein-2 (CXCL7)

Alternate names: CXCL7, NAP2

Catalog No.: PA1171

Quantity: 2 µg

Concentration: 1.0 mg/ml

Species: Human

Source: E. coli, E.coli

Format:
State: Sterile Filtered White lyophilized (freeze-dried) powder.
Purity: ›98% Greater than 98.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Anion-exchange FPLC.
(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained.
Buffer System: Recombinant Neutrophil-activating peptide 2, lyophilized from a concentrated solution in water containing no additives.
Endotoxin Level: Less than 0.1 ng/µg (IEU/µg) of NAP-2.
Dimers: Less than 1% as determined by silver-stained SDS-PAGE gel analysis.
Reconstitution: It is recommended to reconstitute the lyophilized NAP-2 in sterile 18MΩ-cm H2O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Description:
Recombinant Human NAP-2 produced in E.Coli is a non-glycosylated, Polypeptide chain containing 70 amino acids. Recombinant NAP-2 is purified by proprietary chromatographic techniques.
AA Sequence:
`The sequence of the first five N-terminal amino acids was determined and was found to be Ala-Glu-Leu-Arg-Cys.`
Biological Activity: NAP-2 is fully biologically active when compared to standard. The specific activity as determined by the ability of NAP-2 to chemoattract human neurotrophils using a concentration of 1-10 ng/ml.
Molecular weight: 7609 Dalton.
Molecular weight: 8 kDa

Add. Information:
Protein quantitation was carried out by two independent methods:
1. UV spectroscopy at 280 nm .
2. Analysis by RP-HPLC, using a standard solution of NAP-2 as a Reference Standard.

Storage:
Lyophilized NAP-2 although stable at room temperature for 3 weeks, should be stored desiccated below -18 C. Upon reconstitution NAP-2 should be stored at 4 C between 2-7 days and for future use below -18 C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

General Readings:

1. Rennen HJ, Frielink C, Brandt E, Zaat SA, Boerman OC, Oyen WJ, et al. Relationship between neutrophil-binding affinity and suitability for infection imaging: comparison of (99m)Tc-labeled NAP-2 (CXCL-7) and 3 C-terminally truncated isoforms. J Nucl Med. 2004 Jul;45(7):1217-23. PubMed PMID: 15235069.
2. Malawista SE, Van Damme J, Smallwood JI, de Boisfleury Chevance A. Chemotactic activity of human blood leukocytes in plasma treated with EDTA: chemoattraction of neutrophils about monocytes is mediated by the generation of NAP-2. J Leukoc Biol. 2002 Jul;72(1):175-82. PubMed PMID: 12101278.
3. Schwartzkopff F, Brandt E, Petersen F, Flad HD, Bock L, Ludwig A. The CXC chemokine NAP-2 mediates differential heterologous desensitization of neutrophil effector functions elicited by platelet-activating factor. J Interferon Cytokine Res. 2002 Feb;22(2):257-67. PubMed PMID: 11911809.
4. Piccardoni P, Evangelista V, Piccoli A, de Gaetano G, Walz A, Cerletti C. Thrombin-activated human platelets release two NAP-2 variants that stimulate polymorphonuclear leukocytes. Thromb Haemost. 1996 Nov;76(5):780-5. PubMed PMID: 8950790.
5. Ehlert JE, Petersen F, Kubbutat MH, Gerdes J, Flad HD, Brandt E. Limited and defined truncation at the C terminus enhances receptor binding and degranulation activity of the neutrophil-activating peptide 2 (NAP-2). Comparison of native and recombinant NAP-2 variants. J Biol Chem. 1995 Mar 17;270(11):6338-44. PubMed PMID: 7890771.
6. Besemer J. Neutrophil-activating peptides NAP-2 and IL-8 bind to the same sites on neutrophils but interact in different ways. Discrepancies in binding affinities, receptor densities, and biological effects. J Immunol. 1995 Jan 15;154(2):972-4. PubMed PMID: 7814896.

Pictures:

Precursor- Protein structure and amino acid sequence: PA1171ME0607