



azurocidin (H-70): sc-33129

BACKGROUND

Azurocidin is a multifunctional endotoxin-binding serine protease homolog that accumulates in azurophil granules during the promyelocytic stage of neutrophil differentiation. The human azurocidin gene maps to chromosome 19p13.3 and encodes a 251 amino acid protein. The genes encoding azurocidin, Neutrophil Elastase and Proteinase 3 are in a cluster located at the tip of the short arm of chromosome 19. Each of these three proteins are expressed coordinately and their protein products are packaged together into azurophil granules. When released from activated Granulocytes, azurocidin potentiates bacterial uptake in monocytes and enhances the potential of microbial killing in monocytes and Granulocytes. Azurocidin potentiates the LPS-induced release of proinflammatory cytokines (TNF α , IL-1, and IL-6) from isolated human monocytes. In addition azurocidin induces Ca⁺⁺-dependent cytoskeletal rearrangement and intercellular gap formation in endothelial-cell monolayers *in vitro*, and increases macromolecular efflux in microvessels *in vivo*. Selective inactivation of azurocidin prevents azurophil granule containing neutrophils from inducing endothelial hyper-permeability, suggesting that azurocidin plays a central role in neutrophil trafficking during inflammation.

REFERENCES

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2. Zimmer, M., et al. 1992. Three human elastase-like genes coordinately expressed in the myelomonocyte lineage are organized as a single genetic locus on 19pter. *Proc. Natl. Acad. Sci. USA* 89: 8215-8219.
3. Online Mendelian Inheritance in Man, OMIM™. 1996. Johns Hopkins University, Baltimore, MD. MIM Number: 162815. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Heinzlmann, M., et al. 1998. Heparin-binding protein (CAP37) is internalized in monocytes and increases LPS-induced monocyte activation. *J. Immunol.* 160: 5530-5536.
5. Heinzlmann, M., et al. 1998. Heparin-binding protein (CAP37) is an opsonin for *Staphylococcus aureus* and increases phagocytosis in monocytes. *Inflammation* 22: 493-507.
6. Lindmark, A., et al. 1999. Characterization of the biosynthesis, processing, and sorting of human HBP/CAP37/azurocidin. *J. Leukoc. Biol.* 66: 634-643.
7. Gautam, N., et al. 2001. Heparin-binding protein (HBP/CAP37): a missing link in neutrophil-evoked alteration of vascular permeability. *Nat. Med.* 7: 1123-1127.
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CHROMOSOMAL LOCATION

Genetic locus: AZU1 (human) mapping to 19p13.3.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

SOURCE

azurocidin (H-70) is a rabbit polyclonal antibody raised against amino acids 156-225 mapping within an internal region of azurocidin of human origin.

PRODUCT

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

APPLICATIONS

azurocidin (H-70) is recommended for detection of azurocidin 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)], 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).

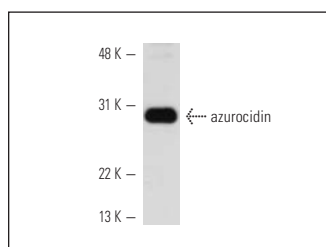
Suitable for use as control antibody for azurocidin siRNA (h): sc-42966.

Molecular Weight of azurocidin: 37 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



azurocidin (H-70): sc-33129. Western blot analysis of human recombinant azurocidin fusion protein.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.