

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Azurocidin/CAP37/HBP in direct ELISAs and Western blots.                                                                                                                                                                                                      |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Azurocidin/CAP37/HBP<br>Ile27-Pro250<br>Accession # P20160                                                                                                                                                            |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunoprecipitation</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Azurocidin, also known as cationic antimicrobial protein 37 (CAP37) and heparin-binding protein (HBP), is a member of the serine protease family that includes Cathepsin G, neutrophil elastase (NE), and proteinase 3 (PR3). These proteases are found in the specialized azurophilic granules of neutrophils (1, 2). Human Azurocidin 1 is encoded by the AZU1 gene located in a cluster with NE and PR3 on chromosome 19pter (2). The open reading frame predicts a 251 amino acid (aa) protein with an N-terminal 26 aa signal sequence and a 7 aa propeptide. There are also eight cysteine residues and 3 putative N-linked glycosylation sites (1).

Although Azurocidin 1 shares a significant degree of aa sequence identity with Cathepsin G, NE, and PR3, it lacks serine protease activity due to mutations at two of the three residues in the catalytic triad (His41Ser and Ser175Gly) (1, 3). Crystallographic analysis suggests that the antibacterial activity of Azurocidin is mediated by a hydrophobic pocket (residues 20 to 44) that binds Gram-negative bacteria lipid A. These structural data also imply that the heparin binding capacity is mediated by non-specific electrostatic interactions between the negatively charged heparin molecule and a large patch of positively charged residues near the lipid A binding site (3).

Azurocidin has also been identified as a modulator of endothelial permeability. Neutrophils arriving first at sites of inflammation release Azurocidin, which acts in a paracrine fashion on endothelial cells causing the development of intercellular gaps and allowing leukocyte extravasation. These findings imply that Azurocidin may be a reasonable therapeutic target for a variety of inflammatory disease conditions (4).

#### PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.