

**DESCRIPTION**

|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Human  |
| <b>Specificity</b>        | Detects human CXCL4/PF4 in direct ELISAs and Western blots. In direct ELISAs, less than 25% cross-reactivity with recombinant mouse CXCL4/PF4 and recombinant rat CXCL4/PF4 is observed, and less than 2% cross-reactivity with recombinant human CXCL7 is observed. |
| <b>Source</b>             | Polyclonal Goat IgG  |
| <b>Purification</b>       | Antigen Affinity-purified  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human CXCL4/PF4<br>Glu32-Ser101<br>Accession # P02776  |
| <b>Formulation</b>        | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.  |

**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>Recommended Concentration</b> | <b>Sample</b> |
|-----------------------|----------------------------------|---------------|
| <b>Western Blot</b>   | 1 µg/mL                          | See Below     |
| <b>Simple Western</b> | 10 µg/mL                         | See Below     |

**DATA**

**Western Blot**

**Detection of Human CXCL4/PF4 by Western Blot.** Western blot shows lysates of human spleen tissue and human platelets. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human CXCL4/PF4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF795) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for CXCL4/PF4 at approximately 11 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Simple Western**

**Detection of Human CXCL4/PF4 by Simple Western™.** Simple Western lane view shows lysates of human platelets, loaded at 0.2 mg/mL. A specific band was detected for CXCL4/PF4 at approximately 15 kDa (as indicated) using 10 µg/mL of Goat Anti-Human CXCL4/PF4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF795) followed by 1:50 dilution of HRP-conjugated Anti-Goat Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

**PREPARATION AND STORAGE**

|                                |  |
|--------------------------------|--|
| <b>Reconstitution</b>          | Reconstitute at 0.2 mg/mL in sterile PBS.  |
| <b>Shipping</b>                | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C   |
| <b>Stability &amp; Storage</b> | <b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul> |

**BACKGROUND**

CXCL4, also known as Platelet Factor 4, is a member of the CXC chemokine family, CXCL4. Human CXCL4 is a 101 amino acid (aa) protein with a 32 aa signal sequence and a 70 aa mature protein. CXCL4 has homology with IL-8 and β-thromboglobulin. Human and mouse CXCL4 share a 64% identity. CXCL4 contains several heparin-binding sites at the C-terminal region. The active protein consists of a tetramer composed of individual CXCL4 subunits. Megakaryocytes synthesize CXCL4 and store it as tetramers in α-granules. The CXCL4 tetramers are secreted by activated platelets and can be measured at micromolar levels in serum. In contrast to other CXC chemokines, CXCL4 lacks chemotactic activity for polymorphonuclear granulocytes. CXCL4 does not contain an ELR motif. However, many other functions have been observed for CXCL4. CXCL4 is involved in monocyte survival and differentiation into macrophages, and it has anti-angiogenic activity. CXCL4 has been demonstrated to inhibit the binding of FGF-2 to high-affinity receptors and its subsequent internalization. Cell surface neutrophil chondroitin sulfate chains serve as CXCL4 binding sites; affinity is controlled by the degree of sulfation of these chains.

**References:**

1. Poncez, M. *et al.* (1987) *Blood* **69**:219.
2. Scheuerer, B. *et al.* (2000) *Blood* **95**:1158.
3. Perollet, C. *et al.* (1998) *Blood* **91**:3289.
4. Petersen, F. *et al.* (1998) *J. Immunol.* **161**:4347.
5. Petersen, F. *et al.* (1999) *J. Biol. Chem.* **274**:12376.
6. Watanabe, O. *et al.* (1999) *J. Hum. Genet.* **44**:173.