

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CXCL5/ENA-78 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant human CXCL1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, 16, recombinant mouse CXCL1, 2, 4, 6, 7, 9, 10, 11, 12, 15, 16, recombinant rat CXCL5, and recombinant porcine CXCL8 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 33103
Purification	Protein A or G purified from ascites
Immunogen	<i>E. coli</i> -derived recombinant human CXCL5/ENA-78 Ala37-Asn114 Accession # P42830
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Human CXCL5/ENA-78 (Catalog # 254-XB)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CXCL5, also known as epithelial cell-derived neutrophil-activating peptide (ENA-78), is an 8 kDa proinflammatory member of the CXC subfamily of chemokines. Its Glu-Leu-Arg (ELR) motif confers angiogenic properties and distinguishes it from ELR-CXC chemokines which are angiostatic (1-3). Human CXCL5 shares 57% amino acid (aa) sequence identity with mouse and rat CXCL5. Among other human ELR⁺ chemokines, it shares 77% aa sequence identity with CXCL6/GCP-2 and 35%-51% with CXCL1/GRO alpha, CXCL2/GRO beta, CXCL3/GRO gamma, CXCL7/NAP-2, and CXCL8/IL-8. Inflammatory stimulation upregulates CXCL5 production in multiple hematopoietic cell types, fibroblasts, endothelial cells, and vascular smooth muscle cells. In vivo, CXCL5 is elevated at sites of inflammation and pulmonary fibrosis where it promotes neutrophil infiltration and activation as well as angiogenesis (3-6). Its upregulation contributes to increased vascularization, tumor growth, and metastasis in many cancers (6-9). Full length CXCL5 (78 aa) is trimmed at the N-terminus by cathepsin G and chymotrypsin to ENA-74 (74 aa) and ENA-70 (70 aa), with the shortened forms showing increased potency relative to full length CXCL5 (10, 11). CXCL5 exerts its effects primarily through interactions with CXCR2 (6, 12). It also binds duffy antigen receptor for chemokines (DARC), which can limit CXCR2-mediated responses (13, 14).

References:

1. Strieter, R.M. *et al.* (2005) Cytokine Growth Factor Rev. **16**:593.
2. Balestrieri, M.L. *et al.* (2008) Cardiovasc. Res. **78**:250.
3. Walz, A. *et al.* (1991) J. Exp. Med. **174**:1355.
4. Strieter, R.M. *et al.* (1992) Immunol. Invest. **21**:549.
5. Koch, A.E. *et al.* (1994) J. Clin. Invest. **94**:1012.
6. Begley, L.A. *et al.* (2008) Neoplasia **10**:244.
7. Vandercappellen, J. *et al.* (2008) Cancer Lett. **267**:226.
8. Arenberg, D.A. *et al.* (1998) J. Clin. Invest. **102**:465.
9. Miyazaki, H. *et al.* (2006) Cancer Res. **66**:4279.
10. Wuyts, A. *et al.* (1999) Eur. J. Biochem. **260**:421.
11. Nufer, O. *et al.* (1999) Biochemistry **38**:636.
12. Ahuja, S.K. and P.M. Murphy (1996) J. Biol. Chem. **271**:20545.
13. Kashiwazaki, M. *et al.* (2003) Int. Immunol. **15**:1219.
14. Horton, L.W. *et al.* (2007) Cancer Res. **67**:9791.