

Human IL-8/CXCL8 ELISA Kit | IL-8 elisa kit

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CATALOG #
AAA281300

REACTIVITY
Human

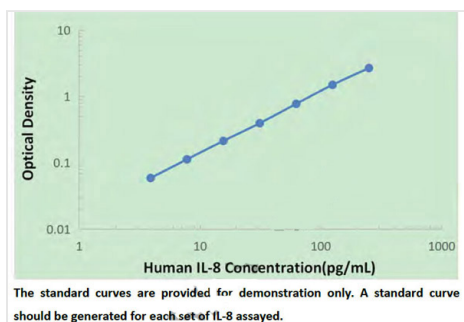
PRODUCT SYNONYMS

IL-8/CXCL8; Human IL-8/CXCL8 ELISA Kit; IL-8 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Human
Specificity	This assay recognizes both recombinant and natural human IL-8. The factors listed below were prepared at 50ng/ml and assayed for cross-reactivity.
Sequence Length	99
Samples	Cell culture supernates, serum and plasma
Assay Type	Quantitative Sandwich
Sensitivity	< 6.2 pg/mL
Intra-assay Precision	Three samples of known concentration were tested 20 times on one plate to evaluate the Intra-plate precision.
Inter-assay Precision	Three samples of known concentration were tested 20 times separate assays to evaluate the Inter-plate precision. Assay were using two lots of components.
Preparation and Storage	Store at 4 degree C.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for IL-8 elisa kit	Principle of the Assay: This assay employs the quantitative sandwich enzyme immunoassay technique. A monoclonal antibody specific for IL-8 has been pre-coated onto a microplate. Standards and samples are pipetted into the wells and any IL-8 present is bound by the immobilized antibody. Following incubation unbound samples are removed during a wash step, and then a detection antibody specific for IL-8 is added to the wells and binds to the combination of capture antibody-IL-8 in sample. Following a wash to remove any unbound combination, and enzyme conjugate is added to the wells. Following incubation and wash steps, a substrate is added. A colored product TMB is formed in proportion to the amount of IL-8 present in the sample. The reaction is terminated by addition of acid and absorbance is measured. A standard curve is prepared from seven IL-8 standard dilutions and IL-8 sample concentration determined. Background/Introduction: Interleukin-8 (IL-8), also known as IL-8, GCP-1, and NAP-1, is a heparin-binding 8-9 kDa member of the alpha, or CXC family of chemokines. There are at least 15 human CXC family members that all adopt a three beta-sheet/one alpha-helix structure. Most CXC chemokines show an N-terminal Glu-Leu-Arg (ELR) tripeptide motif (1, 2). IL-8 circulates as a monomer, homodimer, and heterodimer with CXCL4/PF4. The monomer is considered the most bio-active, while the heterodimer can potentiate PF4 activity (3-6). IL-8 oligomerization is modulated by its interactions with matrix and cell surface glycosaminoglycans (GAGs) (7, 8). Mature human IL-8 shares 65-69% amino acid (aa) identity with canine, feline, and porcine IL-8 (9, 10). There is no IL-8 gene counterpart in rodent. Multiple isoforms of IL-8 are generated through both alternative splicing and differential proteolytic cleavage. In humans, alternative splicing generates an iso-form with an eleven aa substitution at the C-terminus (11). Proteolytic processing results in N-terminal truncation of IL-8 and is likely a cell-specific event. For example, fibroblasts and endothelial cells generate the 1-77 form by cleaving IL-8 following Glu21, while monocytes and lymphocytes generate the 6-77 form by cleaving following Leu25. These truncated forms generally show increased bioactivity, particularly through the CXCR1 receptor (12-14). IL-8 can also undergo citrullination on Arg27 of the precursor, a modification that increases its half-life and ability to induce leukocytosis (15, 16). A wide variety of cells secrete IL-8 including monocytes and neutrophils (17), fibroblasts and keratinocytes (18), mast cells (19), visceral smooth muscle cells (20), dendritic cells (21), type II great alveolar cells (22), and endothelial cells (23). IL-8 bioactivity is mediated through two G-protein-coupled receptors, termed CXCR1/IL-8 RA and CXCR2/IL-8 RB (24). CXCR1 is 45-50 kDa in size and is used almost exclusively by IL-8. CXCR2 is 35-40 kDa in size and is used by nearly all CXC chemokines (25, 26). Both CXCR1 and CXCR2 constitutively associate into functional homodimers. They can also heterodimerize, but these complexes dissociate following IL-8 binding (27). CXCR2 responds to low concentrations of IL-8 and is principally associated with chemotaxis and MMP-9 release. CXCR1, in contrast, responds to high concentrations of IL-8 and is associated with respiratory burst and phospholipase D2 activation (26). Thus, CXCR2 ligation induces leukocyte adhesion to activated vascular endothelium and migration to sites of inflammation, while CXCR1 ligation primes neutrophil antimicrobial activity (28). IL-8 can also form a complex with Serpin A1/alpha-1 Antitrypsin, and this prevents IL-8 interaction with CXCR1 (29). In addition to its pro-inflammatory effects, IL-8 is involved in angiogenesis and the pathogenesis of atherosclerosis and cancer (30-33). It induces VEGF expression in vascular endothelial cells and functions as an autocrine factor for EC growth and angiogenesis (34, 35). It is upregulated in atherosclerotic lesions and is elevated in the serum and cerebrospinal fluid following myocardial infarction (36, 37). In cancer, IL-8 promotes epithelial-mesenchymal transition as well as tumor cell invasiveness and metastasis (32, 38-40).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	10834978
NCBI GeneID	3576
NCBI Accession #	NP_000575.1
NCBI GenBank Nucleotide #	NM_000584.4
UniProt Accession #	P10145; Q6FGF6; Q6LAE6; Q96RG6; Q9C077; Q9UCE1; Q9UCR8; Q9UCR9; Q9UCS0; B2R4L8
Molecular Weight	11,098 Da
NCBI Official Full Name	interleukin-8 isoform 1
NCBI Official Synonym Full Names	C-X-C motif chemokine ligand 8
NCBI Official Symbol	CXCL8
NCBI Official Synonym Symbols	IL8; NAF; GCP1; LECT; LUCT; NAP1; GCP-1; LY NAP; MDNCF; MONAP; NAP-1

NCBI Protein Information	interleukin-8
UniProt Protein Name	Interleukin-8
UniProt Gene Name	CXCL8
UniProt Synonym Gene Names	IL8; IL-8; GCP-1; MDNCF; MONAP; NAP-1; LYNAP; NAF

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/human-elisa-kits/il-8-cxcl8/281300>