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Product Information

SILu™Prot CXCL8, Interleukin-8, human recombinant, expressed in HEK 293 cells
SIL MS Protein Standard, ^{13}C and ^{15}N-labeled

Catalog Number **MSST0057**
Storage Temperature –20 °C

Synonyms: IL-8, C-X-C motif chemokine 8, Chemokine (C-X-C motif), ligand 8, Emoctakin, Granulocyte chemotactic protein 1 (GCP-1), Monocyte-derived neutrophil, chemotactic factor (MDNCF), Monocyte-derived neutrophil-activating peptide (MONAP), Neutrophil-activating protein 1 (NAP-1), Protein 3-10C, T-cell chemotactic factor

Product Description

SILu™Prot CXCL8 is a recombinant, stable isotope-labeled human CXCL8 which incorporates [$^{13}C_6$, $^{15}N_4$]-Arginine and [$^{13}C_6$, $^{15}N_2$]-Lysine. Expressed in human 293 cells, it is designed to be used as an internal standard for bioanalysis of CXCL8 in mass spectrometry. SILu™Prot CXCL8 is a mixture of the 3 main CXCL8 isoforms with the molecular masses, number of amino acids, and relative abundance as described in Table 1.

Table 1.
Relative abundance of CXCL8 isoforms

Amino acids	Theoretical molecular mass (Da)	Length (amino acids)	Relative Abundance (%)
21-99	9108.6	79	12.6
23-99	8922.5	77	66.5
28-99	8385.7	72	20.9

Interleukin-8 (IL-8) is a member of the CXC chemokine subfamily[1] and is produced by blood cells and many types of tissues.[2] The measurement of IL-8 in voided urinary samples may have utility for urine-based detection of bladder cancer.[3] Urinary IL-8 was a strong biomarker of stress under intensive and prolonged demands, both acutely and over time.[4] IL-8 and cathepsin B levels were significantly elevated in melanoma patients, and more importantly, the combination of IL-8 and cathepsin B were also studied as a prognosis marker for melanoma mortality.[5]

Each vial contains 10 μg of SILu™Prot CXCL8 standard, lyophilized from a solution of phosphate buffered saline. Vial content was determined by the Bradford method using BSA as a calibrator.

Purity: ≥95% (SDS-PAGE)

Heavy amino acid incorporation efficiency: ≥98% (MS)

UniProt: P10145

Sequence Information: Amino acids 21-99

EGAVLPRSAKELRCQCIKTYSKPFHPKFIKELRVIESG
PHCANTEIIVKLSDGRELCLDPKENWVQRVVEKFLKR
AENS

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile ultrapure water to a final concentration of 100 μg/mL.

Storage/Stability

Store the lyophilized product at –20 °C. The product is stable for at least 2 years as supplied.

After reconstitution, it is recommended to store the protein in working aliquots at –20 °C.

References

1. Zhang, W., and Chen, H., The study on the interleukin-8 (IL-8). *Sheng Wu Yi Xue Gong Cheng Xue Za Zhi,* **19(4)**, 697-702 (2002).
2. Bickel, M., The role of interleukin-8 in inflammation and mechanisms of regulation. *J. Periodontol*., **64(5 Suppl)**, 456-60 (1993).
3. Urquidi, V. et al., IL-8 as a urinary biomarker for the detection of bladder cancer. *BMC Urol*., **12**, 12 (2012).
4. Dutheil, F. et al., Urinary Interleukin-8 Is a Biomarker of Stress in Emergency Physicians, Especially with Advancing Age — The JOBSTRESS* Randomized Trial. *PLoS ONE,* **8(8)**, e71658 (2013).
5. Hongtao, Z. et al., IL8 and Cathepsin B as Melanoma Serum Biomarkers*. Int. J. Mol. Sci.,* **12**, 1505-1518 (2011).

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