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Product Information

SILu™Prot TIMP1, Metalloproteinase inhibitor 1 human, recombinant, expressed in HEK 293 cells, SIL MS Protein Standard, ^{13}C and ^{15}N-labeled

Catalog Number **MSST0043**
Storage Temperature –20 °C

Synonyms: Erythroid-potentiating activity (EPA), Fibroblast collagenase inhibitor, Collagenase inhibitor, Tissue inhibitor of metalloproteinases 1 (TIMP-1)

Product Description
SILu™Prot TIMP1 is a recombinant, stable isotope-labeled human TIMP1 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 TIMP1 in mass spectrometry. SILu™Prot TIMP1 is a protein of 184 amino acids, with a calculated molecular mass of 20.7 kDa.

TIMP-1 is glycoprotein that is overexpressed in the supernatant of tissue extracts of breast, gastric, colorectal, and hepatocellular carcinomas.[1-4] It belongs to the family of “tissue inhibitors of metalloproteinases”, a group of proteins that help regulate bone turnover.[5] TIMP-1 serum levels are significantly associated with HER2 extracellular domain (ECD)-positivity and poorer disease-free survival among primary breast cancer patients with HER2 overexpression.[6] High levels of serum TIMP-1 correlate with advanced disease and predict for poor survival in patients with multiple myeloma treated with bortezomib and/or IMiDs during their disease course.[5]

Each vial contains 10 μg of SILu™Prot TIMP1 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 acids incorporation efficiency: ≥98% (MS)

UniProt: P01033

Sequence Information:
CTCVPPHPQTAFCNSDLVIRAKFVGTPEVNQTTLYQR
YEIKMTKMYKGFQALGDAADIRFVYTPAMESVCGYFH
RSHNRSEEFLIAGKLQDGLLHITTCSFVAPWNSLSLA
QRRGFTKTYTVGCEECTVFPCLSIPCKLQSGTHCLW
TDQLLQGSEKGFQSRHLACLPREPGLCTWQSLRSQI
A

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

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3. Holten-Andersen, M. et al., EORTC-Receptor and Biomarker Group. Association between preoperative plasma levels of tissue inhibitor of metalloproteinases 1 and rectal cancer patient survival. a validation study. *Eur. J. Cancer*, **40**, 64–72 (2004).
4. Yoshikawa, T. et al., Intratumoral concentrations of tissue inhibitor of matrix metalloproteinase 1 in patients with gastric carcinoma: a new biomarker for invasion and its impact on survival. *Cancer*, **91**, 1739–1744 (2001).
5. Terpos, E. et al., High levels of serum TIMP-1 correlate with advanced disease and predict for poor survival in patients with multiple myeloma treated with novel agents, *Leukemia Research*, **34**, 399-402 (2010).
6. Tsai, H.P. et al., Relationships between serum HER2 ECD, TIMP-1 and clinical outcomes in Taiwanese breast cancer. *World J. Surg. Oncol*., **10**, 42 (2012).

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Legal Information

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