

Product Information

SILu™Lite TIMP1, Metalloproteinase inhibitor 1 human, recombinant, expressed in HEK 293 cells, MS Protein Standard

Catalog Number **MSST0044**

Storage Temperature -20°C

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

Product Description

SILu™Lite TIMP1 is a recombinant human protein expressed in human 293 cells. It consists of 184 amino acids, with a calculated molecular mass of 20.7 kDa. SILu™Lite TIMP1 is an analytical standard designed to be used as starting material for preparation of calibrators and controls in LC-MS applications.

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 50 µg of SILu™Lite TIMP1 standard, lyophilized from a solution of phosphate buffered saline. Vial content was determined by the Bradford method using BSA as a calibrator.

Purity: $\geq 95\%$ (SDS-PAGE)

UniProt: P01033

Sequence Information:

CTCVPPHPQTAFNCNSDLVIRAKFVGTPEVNQTTLYQR
YEIKMTKMYKGFQALGDAADIRFVYTPAMESVCGYFH
RSHNRSEEFLLIAGKLQDGLLHITTCFVAPWNSLSLA
QRRGFTKTYTVGCEECTVFPCLSIPLQSGTHCLW
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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2. Matsumoto, E. et al., Increased levels of tissue inhibitor of metalloproteinase-1 in human hepatocellular carcinoma. *Liver Int.*, **24**, 379–383 (2004).
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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