

# 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 a glycoprotein that is overexpressed in the supernatant of tissue extracts of breast, gastric, colorectal, and hepatocellular carcinomas.<sup>1-4</sup> It belongs to the family of “tissue inhibitors of metalloproteinases”, a group of proteins that help regulate bone turnover.<sup>5</sup> 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.<sup>6</sup> 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.<sup>5</sup>

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: ≥95% (SDS-PAGE)

UniProt: P01033

### Sequence Information:

CTCVPPHPQTAFCNSDLVIRAKFVGTPEVNQTTLYQR  
YEIKMTKMYKGFQALGDAADIRFVYTPAMESVCYFH  
RSHNRSEEFIAGKLQDGLLHITTCSFVAPWNSLSLA  
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

1. Dey, N. et al., PI3K-mTOR in Cancer and Cancer Therapy, Humana Press (New York, NY: 2016).
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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