**- PRODUCT DATA SHEET -**

**Name of Product:** Recombinant Human TIMP2 Protein  
**Catalog Number:** hRP-1779  
**Manufacturer:** LD Biopharma, Inc.

**Introduction**

Human metalloproteinase inhibitor 2 (TIMP2) gene is a member of the TIMP gene family. The proteins encoded by TIMP2 gene family are natural inhibitors of the matrix metalloproteinases, a group of peptidases involved in degradation of the extracellular matrix. In addition to an inhibitory role against metalloproteinases, the TIMP2 protein has a unique role among TIMP family members in its ability to directly suppress the proliferation of endothelial cells. As a result, the encoded protein may be critical to the maintenance of tissue homeostasis by suppressing the proliferation of quiescent tissues in response to angiogenic factors, and by inhibiting protease activity in tissues undergoing remodelling of the extracellular matrix. Recent data indicated that by monitoring blood level of TIMP2 protein with other biomarker protein can serves as diagnostic and predictive parameter in various cancers, such as prostate and lung cancer.

Full-length mature protein of human TIMP2 cDNA (27 – 220aa, derived from BC071586) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein was expressed in E. coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

**Gene Symbol:** TIMP2  (CSC-21K; DDC8)  
**Accession Number:** NP_003246  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

**Key References**


**Applications**

1. May be used for in vitro TIMP2 mediated matrix metalloproteinases activities regulation study for cell differentiation or cancer cell metastasis with this protein either as soluble factor or as coating matrix protein.

2. May be used for mapping TMP2 protein-protein interaction.

3. Potential biomarker protein for diagnostic/prognosis, such as prostate or lung cancer.

4. As immunogen for specific antibody production.

**Quality Control**

Purity: > 90% by SDS-PAGE.

**Recombinant Protein Sequence**

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MASMTGGQQMGRGHHHHHHENLYFQGGECSFVHPQQAFCNADVVRRAKAVSEKEVGDSNDIYNPIKRIQYEIKQIKMFKEKDEIFIYTAPSSAVCGVSLVDVGGKKEYLIAGKAEGDGMHITL
CDFIVPDWDTLSSTQKSLNHRYQMGECKITRCPMIPCYISSPDECLWMDWVTEKINGHQAKF
FACIKRSDGSCAWYRGAPPQEFLDIEDP
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