Recombinant Human TIMP2/TIMP-2 Protein

Catalog Number: PKSH031634

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

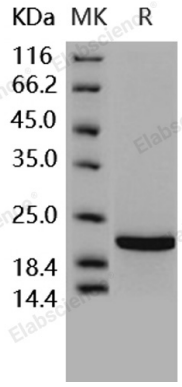
Description

Species	Human
Source	HEK293 Cells-derived Human TIMP2/TIMP-2 protein Cys 27-Pro 220
Calculated MW	22 kDa
Observed MW	20 kDa
Accession	NP_003246.1
Bio-activity	Measured by its ability to inhibit human MMP-2 cleavage of a fluorogenic peptide substrate MCA-PLGL-DPA-AR-NH2(R&D Systems, Catalog # ES001). The IC50 value is < 4 nM.

Properties

Purity	> 96 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 96 % as determined by reducing SDS-PAGE.

Background

Tissue inhibitors of metalloproteinases (TIMP) family are natural inhibitors of the matrix metalloproteinases (MMPs), the zinc enzymes involved in extracellular matrix maintenance and remodeling. The TIMP family encompasses four members (TIMP1-4), and they inhibit most MMPs by forming non-covalent binary complex. TIMP2 is a 22 kDa non N-glycosylated protein expressed by a variety of cell types, and plays a unique role among TIMP family members owing to its functions to regulate cellular responses to growth factors. Findings establish an unexpected, MMP-independent mechanism for TIMP2 inhibition of endothelial cell proliferation in vitro and reveal an important component of the antiangiogenic effect of TIMP2 in vivo. TIMP-2 thus is critical to the maintenance of tissue homeostasis and is involved in the regulation of tumor microenvironment.

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