

## Endostatin Protein, Mouse, Recombinant (His)

### General Information

Synonyms:	antiangiogenic agent;type XVIII;collagen $\alpha$ -1(XVIII)chain;collagen alpha-1(XVIII)chain; Endostatin;COL18A1;collagen
Protein Construction:	His1591-Lys1774
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P39061
Molecular Weight:	18 KDa (reducing condition)
AA Sequence:	His1591-Lys1774

### QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/ $\mu$ g (1 EU/ $\mu$ g) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 $\mu$ m filter, containing PBS, pH 7.4.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at  $-80^{\circ}\text{C}$ . For reconstituted protein solutions, the solution can be stored at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$  for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

Endostatin, an endogenous non-glycosylated inhibitor of endothelial cell proliferation and angiogenesis. It is produced and/or trimmed by metalloproteinases such as MMP-2 and MMP-9, and cathepsins S, B and L. The N-terminal ~27 aa of Endostatin appear to contain the majority of its activity. This region contains zinc binding sites that are thought to be critical for its anti-endothelial and anti-tumor effects, as well as multiple cleavage sites that, when used, can modify its activity. Mouse Endostatin shares 96% aa sequence identity with rat and 85-87%

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with human, bovine and equine Endostatin. It is predominantly expressed in liver, kidney, lung, skeletal muscle and testis. Endostatin inhibits endothelial cell growth by inducing cell cycle arrest in G1 phase and initiating apoptosis. It is also thought to down-regulate angiogenesis by blocking VEGF-induced endothelial cell migration. Endostatin may also be involved with down-regulation of angiogenesis after establishment of placental circulation in the pregnant uterus.

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