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Datasheet for ABIN2666579

COL18A1 Protein (AA 1591-1774)

Overview

Quantity:	100 µg
Target:	COL18A1
Protein Characteristics:	AA 1591-1774
Origin:	Mouse
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	COL18A1
Alternative Name:	Endostatin (COL18A1 Products)
Target Type:	Chemical
Background:	Endostatin is a C-terminal proteolytic fragment of collagen XVIII α1 (Col 18) that is localized in the vascular basement membrane of almost all epithelia and endothelia. Endostatin is

Target Details

produced from catalytic cleavage from MMPs, cathepsin L, and S. It is detected in circulation at a physiologic level of 20 to 50 ng/mL in serum. Crystal X-ray analysis of endostatin has shown a compact globular structure, with one face rich in arginine residues that acts as a heparin-binding motif. Endostatin interacts with multiple molecules including heparin, heparan sulfate, chondroitin sulfate, dermatan sulfate, thrombospondin-1, SPARC, collagens (I, IV, and VI), the amyloid peptide A β (1-42), transglutaminase-2, and among others. Endostatins derived from collagens XV and XVIII differ in structure and binding properties, tissue distribution, and anti-angiogenic activity. Endostatin is an endogenous angiostatic factor that induces apoptosis in endothelial cells and inhibits endothelial cell migration in vitro. Col 18-null mice showed faster tumor growth when implanted with tumor cells that do not produce Col 18. Overexpression of circulating endostatin in transgenic mice resulted in reduced tumor growth. Experimental model of glomerulonephritis in Col 18-null mice showed that the absence of this molecule exacerbates immune-mediated glomerulonephritis.

Molecular Weight:	The 192 amino acid recombinant protein has a predicted molecular mass of approximately 21.3 kDa. The DTT-reduced and non-reduced protein migrate at approximately 23 and 20 kDa respectively by SDS-PAGE. The predicted N-terminal amino acid is His.
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Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: ED ₅₀ = 1.0 - 6.0 μ g /mL, as determined by the inhibition of HUVEC cell proliferation, which is induced by human FGF basic in the presence of 2 μ g/ml of fibronectin.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. The protein can be aliquoted and stored at -20 °C to -70 °C. Stock solutions can also be prepared at 50 - 100 μ g/mL in sterile buffers (PBS, HPBS, DPBS, or EBSS) containing carrier proteins such as 0.2-1 % BSA or HAS, and stored in working aliquots at -20 °C to -70 °C.
Buffer:	0.22 μ m filtered protein solution is in 10 mM NaHPO ₄ , 0.3 M NaCl, and pH 7.2.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C

Handling

Storage Comment: Unopened vial can be stored between 2°C and 8°C for one month, at -20°C for six months, or at -70°C for one year.