

Collagen Type IV Alpha 1 (COL4a1) Active Protein | COL4a1 active protein

Active Collagen Type IV Alpha 1 (COL4a1)

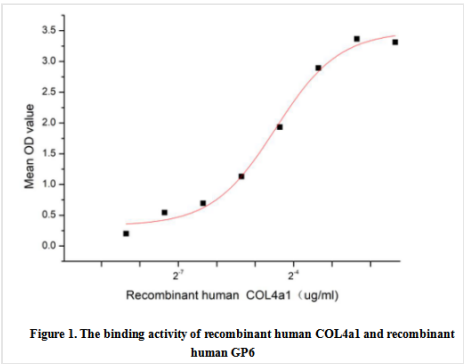
CATALOG # AAA161709	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Collagen Type IV Alpha 1 (COL4a1); Active Collagen Type IV Alpha 1 (COL4a1); Collagen Type IV Alpha 1; COL4-A1; Arresten; Collagen Alpha-1(IV)chain4; COL4a1 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 80% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	His1444~Th r1669
Applicable Applications for COL4a1 active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6.7
Research Area	Metabolic pathway
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

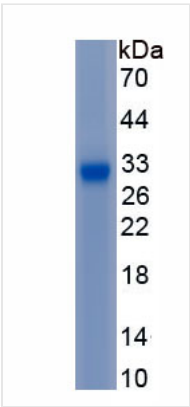


Bioactivity

Collagen Type IV Alpha 1 (COL4a1), a secreted glycoprotein, is a member of the type IV collagen family. COL4a1 is the major structural component of glomerular basement membranes (GBM), forming a 'chicken-wire' meshwork together with laminins, proteoglycans and entactin/nidogen. It can inhibit angiogenesis and tumor formation, and specifically inhibit endothelial cell proliferation, migration and tubule formation. COL4A1 mutations can remain asymptomatic or cause devastating disease. Neonates and children may present with porencephaly, intracerebral hemorrhage, or hemiparesis, whereas adults tend to develop intracranial aneurysms or retinal arteriolar tortuosities. Glycoprotein VI (GP6) has been identified as an interactor of COL4a1, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human COL4a1 and recombinant human GP6. Briefly, COL4a1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to GP6-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-COL4a1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 degree C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 uL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human COL4a1 and recombinant human GP6 was shown in Figure 1, the EC50 for this effect is 0.05 ug/mL.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for COL4a1 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	148536825
NCBI GeneID	1282
NCBI Accession #	NP_001836.2
NCBI GenBank Nucleotide #	NM_001845.4
UniProt Accession #	P02462; Q1P9S9; Q5VWF6; Q86X41; Q8NF88; Q9NYC5; A7E2W4; B1AM70
Molecular Weight	160,615 Da
NCBI Official Full Name	collagen alpha-1(IV) chain preproprotein
NCBI Official Synonym Full Names	collagen, type IV, alpha 1
NCBI Official Symbol	COL4A1
NCBI Official Synonym Symbols	ICH; HANAC; POREN1; arresten
NCBI Protein Information	collagen alpha-1(IV) chain; collagen alpha-1(IV) chain; COL4A1 NC1 domain; collagen IV, alpha-1 polypeptide; collagen of basement membrane, alpha-1 chain
UniProt Protein Name	Collagen alpha-1(IV) chain
UniProt Gene Name	COL4A1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/collagen-type-iv-alpha-1-col4a1/161709>