Recombinant CO4A2 protein (His tag)

Catalog Number	537454
Synonyms	IV
Species	Human
Expression System	E. coli
Accession	P08572
Molecular Weight	Predictes a molecular mass of 28.16 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	1470-1712
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1470-1712 aa (P08572) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Collagen alpha-2(IV) chain fragment (residues 1470-1712), encompassing the functional Canstatin domain derived from the NC1 region. This 243-amino acid fragment is engineered for studying anti-angiogenic and anti-tumor activities, offering a targeted tool for apoptosis and endothelial cell function research. The full-length Collagen alpha-2(IV) chain, encoded by the COL4A2 gene in Homo sapiens, is a key structural component of basement membranes, forming a 'chicken-wire' meshwork in complexes with laminins and proteoglycans. It localizes to the secreted extracellular space and basement membrane. The protein's cleaved product, Canstatin, corresponds to the collagen alpha 2(IV) NC1 domain and exhibits potent anti-angiogenic and anti-tumor properties by inhibiting endothelial cell proliferation and migration, reducing mitochondrial membrane potential, and inducing Fas-dependent apoptosis through activation of procaspase-8 and -9. It acts as a ligand for alphavbeta3 and alphavbeta5 integrins, underscoring its role in cellular signaling pathways relevant to cancer and vascular biology.