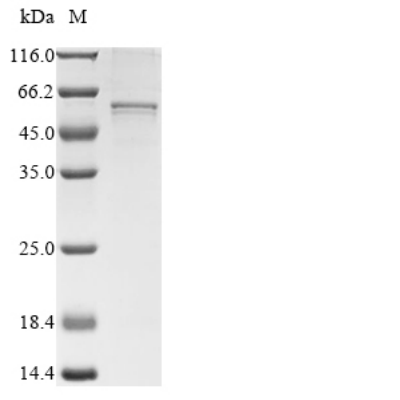
Recombinant Mouse Collagen alpha-1 (XXVI) chain (Col26a1)

Product Code	CSB-BP820987MO
Abbreviation	Recombinant Mouse Col26a1 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	Q91VF6
Storage Buffer	Tris-based buffer,50% glycerol
Product Type	Recombinant Proteins
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	TGFLYPFPAAALQQHGYPEQGAGSPGNGYSSRRHWCHHTVTRTVSCQVQN GSETVVQRVYQSCRWPGPCANLVSYRTLIRPTYRVSYRTVTALEWRCCPGFT GSNCEEECMNCTRLSDMSERLTTLEAKVLLLEAAEQPSGPDNDLPPPQSTPP TWNEDFLPDAIPIAHPGPRRRRPTGPAGPPGQMGPPGPAGPPGSKGEQGQT GEKGPVGPPGLLGPPGPRGLPGEMGRPGPPGPPGPAGSPGLLPNTPQGVLY SLQTPTDKENGDSQLNPAVVDTVLTGIPGPRGPPGPPGPPGPHGPPGPPGAP GSQGLVDERVVARPSGEPSVKEEEDKASAAEGEGVQQLREALKILAERVLILE HMIGVHDPLASPEGGSGQDAALRANLKMKRGGPRPDGILAALLGPDPAQKSA DQAGDRK
Research Area	Signal Transduction
Source	Baculovirus
Target Names	Col26a1
Protein Names	Recommended name: Collagen alpha-1(XXVI) chain Alternative name(s): EMI domain-containing protein 2 Emilin and multimerin domain-containing protein 2 Short name= Emu2
Expression Region	21-440aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	47.7 kDa
Protein Length	Full Length of Mature Protein
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Mouse Collagen alpha-1 (XXVI) chain (Col26a1) is expressed in a baculovirus system, spanning the full mature protein length from amino acids 21 to 440. The protein carries a 10xHis-tag at the N-terminus and a Myc-tag at the C-terminus for purification and detection purposes. SDS-PAGE analysis confirms the preparation achieves greater than 85% purity, which appears suitable for research applications requiring high-quality protein.

Collagen alpha-1 (XXVI) chain represents a key component of the extracellular matrix, where it likely contributes to tissue structure and integrity. The protein seems to participate in pathways related to cell adhesion and intercellular communication. Studies of this protein may provide insights into tissue development and repair mechanisms, potentially making it valuable for developmental biology and regenerative medicine research.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Collagen Structure-Function Analysis in Extracellular Matrix Research

This recombinant Col26a1 protein can help investigate the structural properties and assembly characteristics of type XXVI collagen in vitro. Both His and Myc tags allow for purification and detection in biochemical assays that examine collagen folding, stability, and triple helix formation. Circular dichroism spectroscopy and thermal denaturation studies may characterize the protein's secondary structure and thermodynamic properties. Since the mature protein region (21-440aa) represents the functional domain, it appears well-suited for comparative studies with other collagen types.

2. Antibody Development and Validation Studies

The dual-tagged recombinant protein works as an immunogen and control antigen for developing specific antibodies against mouse Col26a1. His and Myc tags streamline protein purification for immunization protocols and subsequent

antibody screening through ELISA or Western blot. This protein can validate antibody specificity and cross-reactivity in preclinical studies. The high purity (>85%) suggests minimal contamination that might interfere with antibody development processes.

3. Protein-Protein Interaction Screening

The N-terminal His tag allows immobilization on nickel-based affinity matrices for pull-down assays to identify potential Col26a1 binding partners. Meanwhile, the C-terminal Myc tag provides detection and quantification of the bait protein in interaction studies. Co-immunoprecipitation experiments or surface plasmon resonance studies using this recombinant protein could characterize binding kinetics with other extracellular matrix components. Such investigations might advance understanding of Col26a1's role in matrix assembly and cellular adhesion mechanisms.

4. Cell Culture and Adhesion Assays

This purified recombinant protein can be coated onto culture surfaces to study cell-matrix interactions in vitro. The mature protein region may contain cell binding domains that could influence cellular adhesion, migration, or differentiation. Cell attachment assays using various mouse cell lines might evaluate Col26a1's role as a substrate for cellular processes. The Myc tag enables verification of protein coating efficiency and distribution on culture surfaces through immunofluorescence microscopy.

Shelf Life

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