

Collagen alpha-1(III) chain/COL3A Protein, Mouse (HEK293, His)

Cat. No.:	HY-P7886
Synonyms:	rMuCollagen alpha-1(III) chain/COL3A, His; Collagen alpha-1(III) chain; Col3a1
Species:	Mouse
Source:	HEK293
Accession:	P08121 (Q155-G1219)
Gene ID:	12825
Molecular Weight:	Approximately 130.0 kDa

PROPERTIES

AA Sequence

Q F D S Y D V K S G	V G G M G G Y P G P	A G P P G P P G P P	G S S G H P G S P G
S P G Y Q G P P G E	P G Q A G P A G P P	G P P G A L G P A G	P A G K D G E S G R
P G R P G E R G L P	G P P G I K G P A G	M P G F P G M K G H	R G F D G R N G E K
G E T G A P G L K G	E N G L P G D N G A	P G P M G P R G A P	G E R G R P G L P G
A A G A R G N D G A	R G S D G Q P G P P	G P P G T A G F P G	S P G A K G E V G P
A G S P G S N G S P	G Q R G E P G P Q G	H A G A Q G P P G P	P G N N G S P G G K
G E M G P A G I P G	A P G L I G A R G P	P G P A G T N G I P	G T R G P S G E P G
K N G A K G E P G A	R G E R G E A G S P	G I P G P K G E D G	K D G S P G E P G A
N G L P G A A G E R	G P S G F R G P A G	P N G I P G E K G P	P G E R G G P G P A
G P R G V A G E P G	R D G T P G G P G I	R G M P G S P G G P	G N D G K P G P P G
S Q G E S G R P G P	P G P S G P R G Q P	G V M G F P G P K G	N D G A P G K N G E
R G G P G G P G L P	G P A G K N G E T G	P Q G P P G P T G P	A G D K G D S G P P
G P Q G L Q G I P G	T G G P P G E N G K	P G E P G P K G E V	G A P G A P G G K G
D S G A P G E R G P	P G T A G I P G A R	G G A G P P G P E G	G K G P A G P P G P
P G A S G S P G L Q	G M P G E R G G P G	S P G P K G E K G E	P G G A G A D G V P
G K D G P R G P A G	P I G P P G P A G Q	P G D K G E G G S P	G L P G I A G P R G
G P G E R G E H G P	P G P A G F P G A P	G Q N G E P G A K G	E R G A P G E K G E
G G P P G P A G P T	G S S G P A G P P G	P Q G V K G E R G S	P G G P G T A G F P
G G R G L P G P P G	N N G N P G P P G P	S G A P G K D G P P	G P A G N S G S P G
N P G I A G P K G D	A G Q P G E K G P P	G A Q G P P G S P G	P L G I A G L T G A
R G L A G P P G M P	G P R G S P G P Q G	I K G E S G K P G A	S G H N G E R G P P
G P Q G L P G Q P G	T A G E P G R D G N	P G S D G Q P G R D	G S P G G K G D R G
E N G S P G A P G A	P G H P G P P G P V	G P S G K S G D R G	E T G P A G P S G A
P G P A G A R G A P	G P Q G P R G D K G	E T G E R G S N G I	K G H R G F P G N P
G P P G S P G A A G	H Q G A I G S P G P	A G P R G P V G P H	G P P G K D G T S G
H P G P I G P P G P	R G N R G E R G S E	G S P G H P G Q P G	P P G P P G A P G P
C C G G G A A A I A	G V G G E K S G G F	S P Y Y G	

Appearance

Solution.

Formulation

Supplied as a 0.2 µm filtered solution of 20 mM HAC-NaAc, 150 mM NaCl, pH 4.5.

Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background

Collagen alpha-1(III) chain, encoded by the COL3A gene, is a vital constituent of collagen type III, prominently found in various soft connective tissues alongside type I collagen. This protein assumes a crucial role in the intricate regulation of cortical development. Particularly noteworthy is its role as the principal ligand for ADGRG1 in the developing brain. The binding of Collagen alpha-1(III) chain to ADGRG1 has profound effects, including the inhibition of neuronal migration and activation of the RhoA pathway. This activation is achieved by facilitating the coupling of ADGRG1 to GNA13 and possibly GNA12. The trimeric structure of Collagen alpha-1(III) chain consists of identical alpha 1(III) chains, connected through interchain disulfide bonds, and further stabilized by cross-linking through hydroxylysines. This intricate interplay highlights the multifaceted involvement of Collagen alpha-1(III) chain in developmental processes, particularly within the context of neuronal regulation. (

REFERENCES

- [1]. Guidong Yao, et al. Lnc-GULP1-2:1 affects granulosa cell proliferation by regulating COL3A1 expression and localization. J Ovarian Res. 2021 Jan 20;14(1):16.
- [2]. Yihong Wang, et al. Collagen type III α 1 as a useful diagnostic immunohistochemical marker for fibroepithelial lesions of the breast. Hum Pathol. 2016 Nov;57:176-181.

Caution: Product has not been fully validated for medical applications. For research use only.

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