

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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#### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in





# Anti-Collagen I [AFA] Bulk Size Ab04239-23.0-BT

Isotype and Format: Rabbit IgG, Kappa

**Clone Number: AFA** 

**Alternative Name(s) of Target:** CTTR1;  $\alpha$ 2Ct;  $\alpha$ 2(I)C-telopeptide; C-terminal telopeptide of the  $\alpha$ 2 chain;

Procollagen I

**UniProt Accession Number of Target Protein:** 

Published Application(s): in vivo, therapeutic, Block

Published Species Reactivity: Human

**Immunogen:** The original antibody was produced by immunizing mice with a synthetic peptide (GGGYDFGYDGDFYRA) whose sequence corresponds to that of the C-terminal telopeptide of the  $\alpha$ 2 chain ( $\alpha$ 2Ct).

**Specificity:** This antibody is specific for human collagen I, showing high affinity to the GDF sequence (in A2\_DGDFY, part of the  $\alpha$ 2(I)C-telopeptide), suggesting it is a critical epitope.

**Application Notes:** This antibody binds human collagen I and blocks the binding activity of its C-terminal telopeptide region (denoted as CTTR1) consisting of two  $\alpha 1$ (I)C-telopeptides (denoted as  $\alpha 1$ Ct) and one  $\alpha 2$ (I)C-telopeptide (denoted as  $\alpha 2$ Ct). The K<sub>D</sub> of this antibody and its Fab and scFv with native  $\alpha 2$ Ct present in procollagen I and with synthetic  $\alpha 2$ Ct were 663 pM, 268 nM, 21 pM, 57 nM, and 75nM for full-length AFA/procollagen I, Fab AFA antibody/procollagen I, full-length AFA antibody/synthetic  $\alpha 2$ Ct, Fab AFA antibody/synthetic  $\alpha 2$ Ct, and scFv/procollagen I, respectively (US20200048333A1). A chimeric IgG version of the original IgA version of this antibody was engineered (Fertala et al., 2013; PMID: 23586407). This antibody has been shown to be an effective therapeutic tool for blocking collagen fibril formation in various models (Fertala et al., 2017; PMID: 28972447) (Fertala et al., 2017; PMID: 23586407).

**Antibody First Published in:** Chung et al. Collagen fibril formation. A new target to limit fibrosis J Biol Chem. 2008 Sep 19;283(38):25879-86. doi: 10.1074/jbc.M804272200 PMID:18650436

**Note on publication:** The original publication introduces a novel concept for reducing fibrotic deposits by inhibiting the self-assembly of collagen molecules into fibrils, utilizing monoclonal antibodies targeting the telopeptide region to block collagen interactions and demonstrating efficacy in reducing collagen fibrils in vitro and in organotypic constructs.

#### **Product Form**

Size: 1 mg Purified antibody in bulk size.

**Purification:** 

Protein A affinity purified **Supplied In:** PBS only.

**Storage Recommendation:** Store at 4°C for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.