

## DESCRIPTION

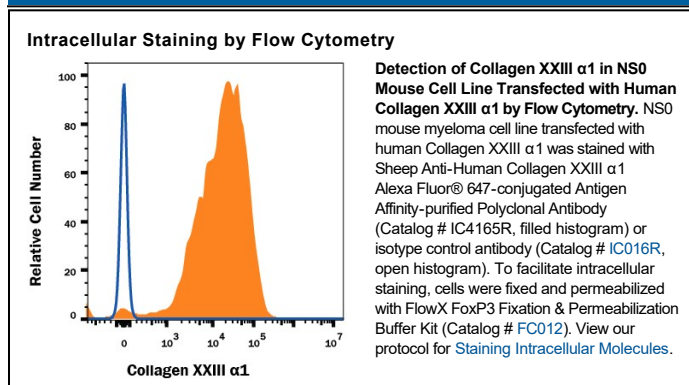
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Collagen XXIII $\alpha 1$ in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 5% cross-reactivity with recombinant human COL25A1 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Collagen XXIII $\alpha 1$ Glu111-Lys540 Accession # Q86Y22
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Intracellular Staining by Flow Cytometry</b>	5 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> ● 12 months from date of receipt, 2 to 8 °C as supplied.

## BACKGROUND

Collagen XXIII alpha 1 (sometimes abbreviated COL23A1) is a ~75 kDa type II transmembrane nonfibrillar collagen that is a member of the collagenous transmembrane protein superfamily (1, 2). This family also includes collagens XIII, XVII, XXV and non-collagens with triple-helical regions such as ectodysplasin A, class A macrophage scavenger receptors, and MARCO (2, 3). The human Collagen XXIII mRNA encodes a 540 amino acid (aa) protein containing a 34 aa N-terminal cytoplasmic domain, a 21 aa transmembrane (TM) domain and a 485 aa extracellular domain (ECD). The ECD contains a coiled-coil consensus sequence to aid homotrimerization (aa 64-69), a furin cleavage site (aa 105-110), a pair of cysteines thought to form intermolecular disulfides (aa 106 and 108), and three collagen domains (1, 3-5). The C-terminal 20 aa, including cysteines at aa 525 and 537 of Collagen XXIII, is conserved among TM collagen proteins. Proteolytic cleavage, occurs mainly in the Golgi, and allows the Collagen XXIII ectodomain to be secreted as a soluble trimer of ~60 kDa subunits (1, 6). Cell surface cleavage can also occur, but is slow, presumably due to the presence of Collagen XXIII in lipid raft membrane domains (6). The protein database includes three variants of 537, 316 and 309 aa with various portions missing or substituted; all appear to lack TM segments (7). The human Collagen XXIII ECD shares 92%, 93%, and 91% aa sequence identity with mouse, rat, and canine Collagen XXIII, respectively. Collagen XXIII is concentrated at sites of cell contact in epithelia, and is now known to bind to Integrin  $\alpha 2 \beta 1$  on the surface of stratum basale keratinocytes (2, 5, 8).

## References:

1. Banyard, J. et al. (2003) J. Biol. Chem. **278**:20989.
2. Franzke, C-W. et al. (2005) J. Biol. Chem. **280**:4005.
3. Ricard-Blum, S. et al. (2011) Cold Spring Harb. Perspect. Biol. **3**:a004978.
4. Snellman, A. et al. (2007) J. Biol. Chem. **282**:14898.
5. Koch, M. et al. (2006) J. Biol. Chem. **281**:21546.
6. Veit, G. et al. (2007) J. Biol. Chem. **282**:27424.
7. Entrez Accession # EAW53833, EAW53834, and AAH42428.
8. Veit, G. et al. (2011) J. Biol. Chem. **286**:27804.

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