



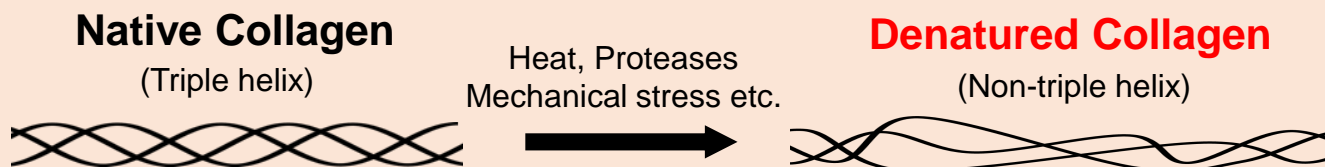
Denatured Collagen Detection Reagent

For more information : http://www.funakoshi.co.jp/exports_contents/95002?FL

Denatured Collagen Detection Reagent is high sensitive and specific reagent for detecting denatured collagen which draws attention as novel pathological markers.

Because of biotin-labeled-reagent, it can be detected by Avidin- or Streptavidin-conjugated reagents.

What is denatured collagen??

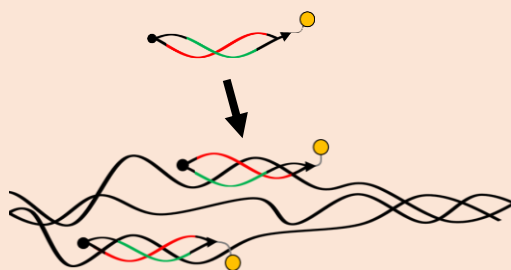


Collagen family

- Extracellular proteins which have unique triple helical structures
- 27 types are identified in human
- Various functions: cell adhesion / migration and mechanical support of tissues etc.

Denatured Collagen Detection Reagent

Denatured Collagen Detection Reagent



Enables to detect denatured collagens specifically and sensitively!

Useful reagent for denatured collagens-related research!

Features

- Detect denatured collagens including immature forms
- Higher sensitivity and specificity for denatured collagens
- Detected by fluorophore/HRP-conjugated avidin/streptavidin

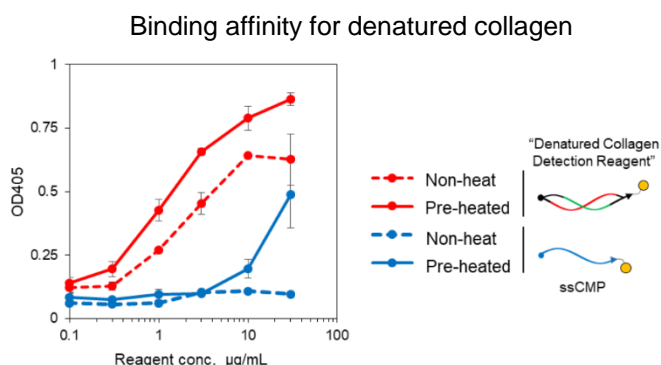
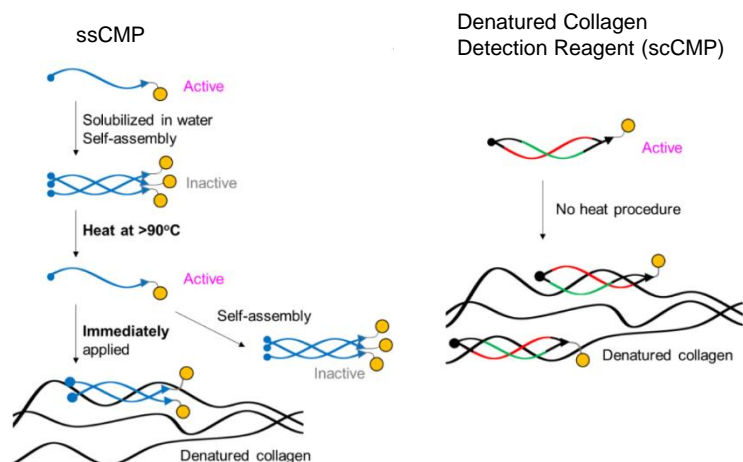
Antibodies are general tools for collagen research, but cannot distinguish between native/denatured.

	Distinguish Native/Denature collagens	Cross-reactivity with collagens family	Species difference	Structure	Molecular weight
Anti-Collagen antibodies	Impossible	One-specific	observed	IgG antibody	150 kDa or less
Denatured Collagen Detection Reagent	Possible	Widely sub-member	Non-observed	Synthetic peptide	Several kDa

Comparative advantage of Denatured Collagen Detection Reagent

“Single stranded CMPs (ssCMP)” vs “Denatured Collagen Detection Reagent (scCMP)”

CMPs (Chemically synthesized collagen mimetic peptides) selectively hybridize in the unfolded region of collagens. Single stranded CMPs (ssCMP) are preferentially self-assembled to homo trimers in water and it dramatically reduces binding affinity for denatured collagens. To avoid self-assembly of ssCMPs, a pre-heating step is required. **Denatured Collagen Detection Reagent (scCMP; strained cyclic CMP) has strained cyclic structure, so self-assembly of the peptides are suppressed and it shows high binding affinity without heating step.**



This item shows higher binding affinity compared with ssCMP.

Applications

- Detection of denatured collagen
- Detection of intracellular unfolded and misfolded collagen
- Detection of total collagen in Western Blotting system

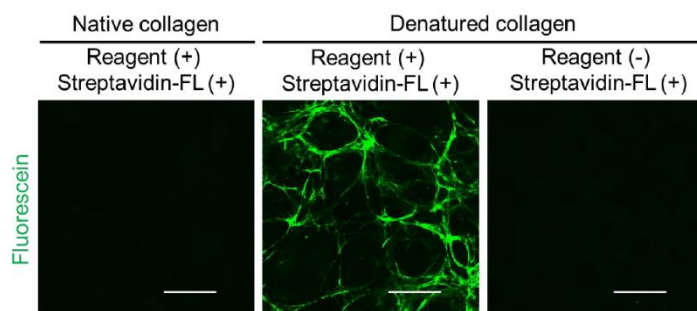
Original paper

Takita, K. K., Fujii, K. K., Ishii, K., Koide, T., *Org. Biomol. Chem.*, **17**, 7380-7387 (2019) Structural optimization of cyclic peptides that efficiently detect denatured collagen.

Application data

Detection of denatured collagens derived from cultured cells

MEF cells were cultured at confluent condition to produce collagens. For preparation of denatured collagens the cell layers were treated with hot PBS. After the denaturation, they were fixed with 4% PFA and blocked by 3% BSA /PBS. They were incubated with 3 µg/ml of the reagent in PBS, and washed by PBS and incubated with streptavidin FITC conjugated. They were washed and observed by confocal laser microscopy. The “Denatured Collagen Detection Reagent” specifically detect denatured collagen, but no signal from native collagen was observed.



Product information

Product Name	Code	Size	Storage	Maker	Price/Detail
Denatured Collagen Detection Reagent	FDV-0035	60 µg	-20 °C	FNA	

NOTE

- ※ All products here are research use only, not for diagnostic use.
- ※ Specs might be changed for improvement without notice.
- ※ Numbers after “#” represents product code.
- ※ Company name and product name are trademark or registered mark.
- ※ Please contact your local distributors for orders, quote request and inquiry.

Your Local Distributor

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