AteloGene®
in vivo siRNA/miRNA Transfection Kit

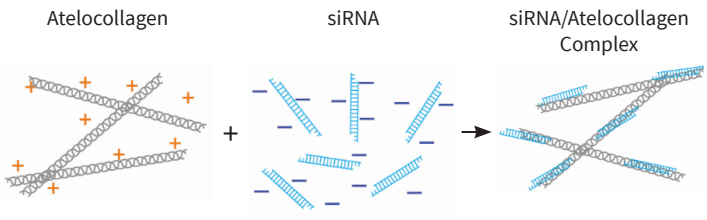
REPROCELL

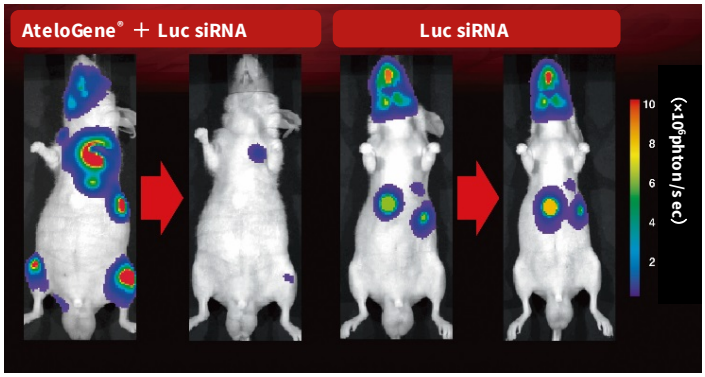
Simple, Efficient Method for Transfection of siRNA and miRNA with low toxicity

Outline

KOKEN

Atelocollagen, the main component of AteloGene, forms siRNA/miRNA atelocollagen complexes by appropriate mixing with synthetic siRNA/miRNA. The siRNA/miRNA atelocollagen complexes are optimal for *in vivo* transfection, and siRNA/miRNA is effectively delivered and introduced into the cells.



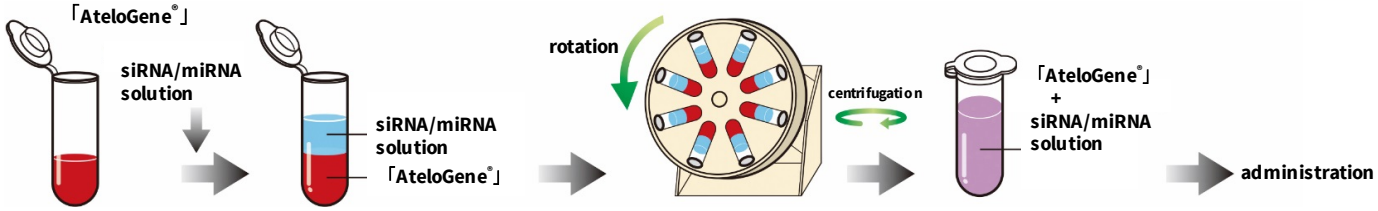


Three types of AteloGene are available depending on your target tissue or method of administration.

- **AteloGene Local Use** is designed for localized administration due to its gelation capability. Gelated siRNA/atelocollagen complexes remain at the injection site and siRNA/miRNA is delivered into the cells effectively.
- **Atelogene Local Use Quick Gelation** is similar to Atelogene Local Use, but the atelocollagen – RNA complex forms a gel more quickly for higher transfection efficiency.
- **AteloGene Systemic Use** is suitable for systemic administration via tail vein injection because it does not gelate, and siRNA/miRNA is delivered effectively by the bloodstream throughout the whole body.

Simple handling

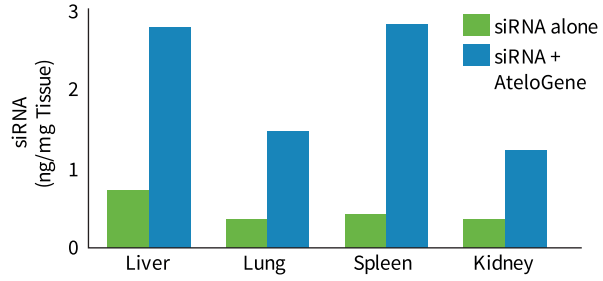
AteloGene procedures are simple and easy. Mix equal volumes of AteloGene and siRNA/miRNA solution, and administrate the siRNA/miRNA AteloGene mixture to the mouse.



Efficient Delivery of siRNA/miRNA

AteloGene enhances delivery of siRNA to tissues.

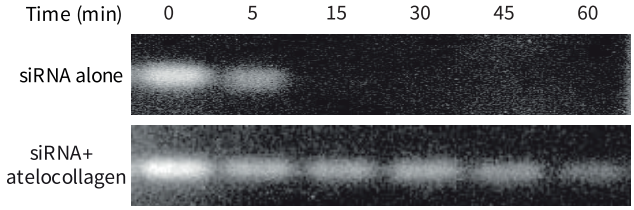
Takeshita F, *et al.* (2005) *Proc Natl Acad Sci USA.* 102 (**34**): 12177-12182.



Stability of siRNA/miRNA

siRNA in the atelocollagen/siRNA complex has enhanced stability relative to naked siRNA.

Minakuchi Y, *et al.* (2004) *Nucleic Acids Res.* 32 (**13**):e109.



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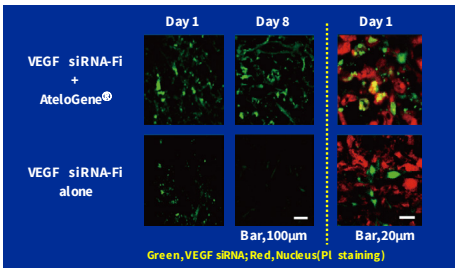
Stability of VEGF siRNA by intratumoral administration

AteloGene Local Use was mixed with fluorescent labeled vascular endothelial growth factor (VEGF) siRNA and injected into subcutaneous tumor. Compared to naked siRNA, Atelocollagen:siRNA complex gives enhanced effectiveness of transfection, leading to prolonged effectiveness of siRNA treatment.

Data source: Dr. Y. Takei, Nagoya University, Japan

Takei Y, et al. (2004) Cancer Res. 64 (10): 3365-3370.

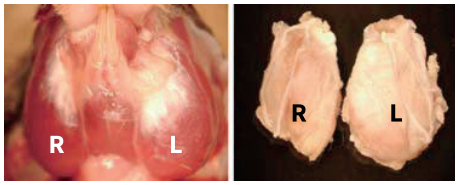


Muscular mass in mice increased by local and systemic administration of myostatin-targeting siRNA

Using the AteloGene Local Use kit, administration of the Atelocollagen:siRNA complex increased molecular mass compared to naked siRNA control. Similar results were seen after systemic administration using **AteloGene Systemic Use**.

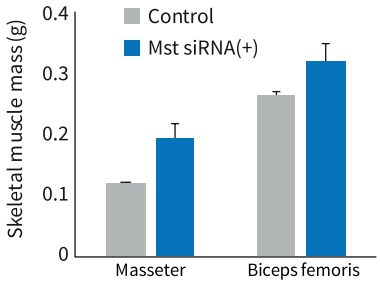
Data source: Dr. S. Noji, Tokushima University, Japan

Takei Y, *et al.* (2004) *Cancer Res.* 64 (**10**): 3365-3370.



Masseter muscle Biceps femoris muscle

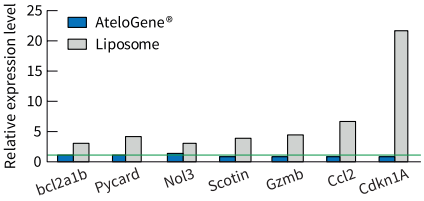
R: control **L**: Mst siRNA(+)



Microarray Analysis Shows Low Toxicity of AteloGene

Expression analysis after administration of siRNA using AteloGene shows reduced expression of apoptosis-related genes relative to administration of siRNA using a liposomal method.

Ogawa S, *et al.* (2011) *J Toxicol Sci.* 36 (**6**): 751-762.

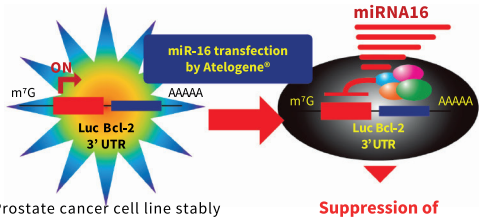


Systemic delivery of miRNA

Using the AteloGene Local Use kit, administration of the Atelocollagen:siRNA complex increased molecular mass compared to naked siRNA control. Similar results were seen after systemic administration using AteloGene Systemic Use.

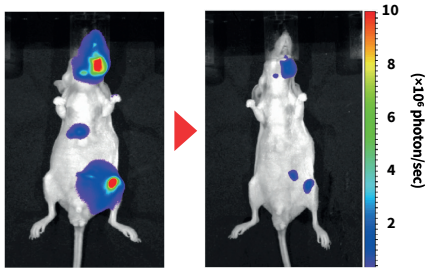
Data source: Dr. F. Takeshita and Dr. T. Ochiya, National Cancer Center Research Institute, Japan

Takei Y, *et al.* (2004) *Cancer Res.* 64 (10): 3365-3370.



Prostate cancer cell line stably transfected with Luciferase

Suppression of Luciferase expression



Pre treatmentT wo days post-treatment

Catalog No.	Product	Quantity	Storage
KKN-1394	AteloGene® Local Use	1 kit*	2-10 °C
KKN-1494	AteloGene® Local Use Guick Gelation	1 kit*	2-10 °C
KKN-1395	AteloGene® Systemic Use	1 kit*	2-10 °C

*Sufficient for 10 injections. Note: An agreement is needed to purchase AteloGene.

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