

Designed to improve cell isolation **reproducibility** and **standardization**, enhancing **cell yield** and **viability**. Suitable for all tissues, **COL G** and **COL H** preserve your stem cells, primary cells, pancreatic islets. COL G and COL H can be mixed in **specific formulations** for each application. Each formulation is **perfectly reproducible** and does not require any preliminary test. The absence of other proteolytic activities and the innovative **purification technology** make the final product **remarkably stable** and ensure **lot-to-lot consistency**.

Product and process innovation

Chimera recombinant collagenases class I-COL G and class II-COL H, separately synthesized. Patented synthesis and formulation technology to obtain reproducible and standardized blends.

Benefits of recombinant collagenases

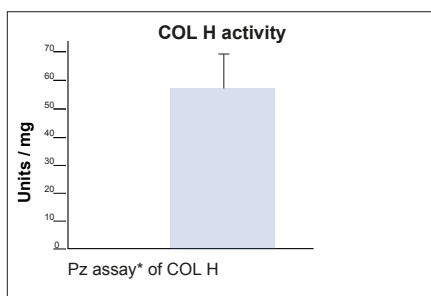
- Lot-to-lot consistency
- Remarkable stability
- High purity
- Endotoxin-free

PROPERTY	COL G	COL H
Endotoxin content EU/mg*	2.5 ±0.5	2.1 ±0.3
Composition variability %**	< 1.0%	< 1.0%
Enzyme activity in the product %***	>99.0%	>99.0%

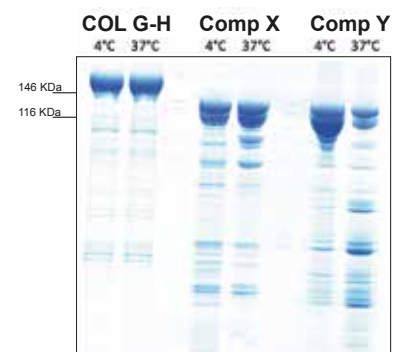
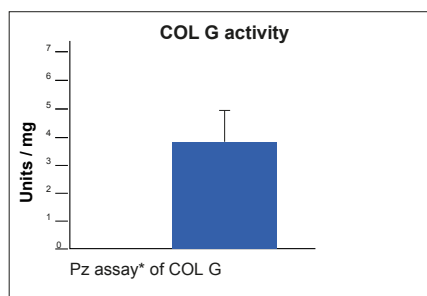
*Endotoxin evaluation performed by LAL assay

**Densitometric analysis

***SDS-PAGE and gelatin zymography



* W. Grassmann et al. Z. Physiol.Chemie 1960, 322, 267

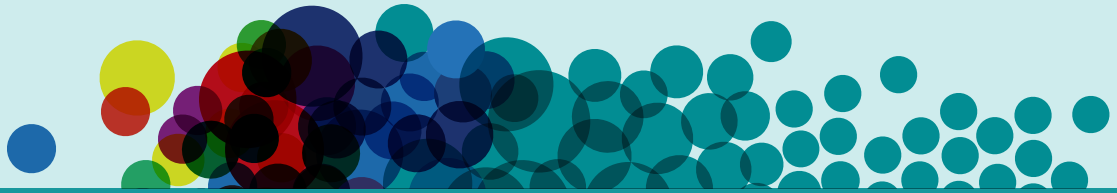


SDS-PAGE after 1 hr incubation at 37 °C of Abiel COL G-H blend and competitors collagenases.

References

1. Salamone et al. Chem. Eng. Trans. 2012, 27, 259-264
2. Salamone et al. Chem. Eng. Trans. 2012, 27, 1-6
3. Abiel s.r.l., PCT WO 2011/073925 A2
4. Salamone et al. Transplant Proc., 2010 42(6), 2043-2048

Abiel is committed to provide researchers with innovative high quality tissue dissociation enzymes for cell therapy and regenerative medicine applications. Abiel's team offers its expertise in enzymology, biochemistry, cell biology and biomarine sciences. Our recombinant tissue dissociation enzymes represent a step forward towards the optimization and standardization of cell isolation protocols. Abiel is involved in research projects and provides services and R&D in the fields of proteolytic enzymes and biomarine science.



Our services

- Screening and characterization of lytic enzymes from biomarine and other natural resources using natural and synthetic substrate.
- Engineering and development of recombinant proteins characterized by higher solubility, stability and activity.
- Production of enzymes in fermenter and their purification.
- A new *in-vitro* test to assess the toxicity of marketed enzymatic procedures in the isolation of human cells.
- *Ex-vivo* assays (mouse and rat model) to select enzymes for tissue dissociation.

R&D and collaborative projects

- Cell isolation protocols standardization and optimization using recombinant collagenases-based blends.
- Investigation of collagenases applications in cosmeceutics, pharmaceuticals (wound healing, burns) and industry.
- Proteolytic enzymes exploitation from biomarine and other natural resources.