Product Data Sheet

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Product Name	*3-D Life* ToGro Hydrogel
Catalog Number	G94-1

Description

The *3-D Life* ToGro Hydrogel Kit contains reagents for the preparation of hydrogels with a soft stiffness (400 Pa; shear modulus) and a RGD Peptide concentration of 0.4 mmol/L. The gel composition allows three-dimensional spreading and migration of most cells. The gel is formed by the crosslinking of modified dextran carrying the cell adhesion motif RGD (RGD-Dextran) with CD-Link. When the two reagents are combined, thiol groups on CD-Link form stable thioether bonds with thiol-reactive groups on RGD-Dextran resulting in gel formation within 20 min. The formation of hydrogel is performed at physiological pH for optimal cell compatibility. CD-Link is composed of polyethylene glycol and a matrix metalloprotease (MMP)-cleavable peptide. The MMP-cleavable peptide is designed for a broad range of MMP cleavage including MMPs MMP1, MMP3, MMP7 and MMP9 [1]. It allows cells to spread and migrate within the gel if they express the indicated MMPs. *3-D Life* ToGro hydrogels can be dissolved by the addition of dextranase (*3-D Life* Dextranase Cat. No. D10-1), which allows recovery of chemically fixed or live cells for post-culture analyses (e.g. RT-PCR) or further cultivation. For preparation of gels follow the instructions of the *3-D Life* ToGro Protocol GP-3 "Preparation of *3-D Life* ToGro Hydrogel". The document can be downloaded on www.cellendes.com.

Quantity

Allows formation of 2.4 ml *3-D Life* ToGro Hydrogel.

Components

Material	Quantity	Concentration of reactive groups	Storage
RGD-Dextran, lyophilized	2x 870 µl*	n.a.	Lyophilisate: -80°C After reconstitution: -short term (≤ 1 month): 4°C -long term: -80°C, avoid frequent freeze-thaw cycles
CD-Link, lyophilized	200 µl*	20 mmol/L	Lyophilisate and after reconstitution: -20°C to -80°C
Reconstitution Buffer	2x 900 µl	n.a	Short term (≤1 month): 4°C Long term: -20°C to -80°C
Water	600 µl	n/a	Room temperature or lower

All materials are filter-sterilized.
*Volume/concentration after reconstitution of lyophilisate.

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Cellendes GmbH
Markwiesenstr. 55, 72770 Reutlingen, Germany
Tel.: +49 7121 15940 0
www.cellendes.com

Reconstitution RGD-Dextran:

1. Briefly centrifuge lyophilized RGD-Dextran to make sure that the entire material is at the bottom of the centrifuge tube.
2. Add 860 µl Reconstitution Buffer per centrifuge tube.
3. Close tube and immediately vortex gently.
4. Repeat vortexing until all material is dissolved (up to 5 minutes). Centrifuge briefly.
5. Let sit reconstituted RGD-Dextran for 1 hr at room temperature.
6. Vortex again. Centrifuge briefly.
7. RGD-Dextran is now ready for use.

When stored at 4°C or -80°C: Before each use warm up RGD-Dextran to room temperature and vortex to obtain a homogenous solution. Centrifuge briefly.

CD-Link:

1. Briefly centrifuge vial containing CD-Link lyophilisate to make sure that the entire material is at the bottom of the reaction tube.
2. Add 188 µl *3-D Life* Water per tube for a concentration of 20 mmol/L thiol groups.
3. Close tube and briefly vortex.
4. Incubate for 5 min.
5. Briefly vortex and centrifuge again.
6. CD-Link is now ready for use.

Intended for research use only. Not for use in human therapeutic or diagnostic applications.

Distributed by:
Ilex Life Sciences LLC
Tel: (828) 531-9949
Email: info@ilexlife.com
Web: https://ilexlife.com/

Cellendes GmbH
Markwiesenstr. 55, 72770 Reutlingen, Germany
Tel.: +49 7121 15940 0
www.cellendes.com