

# Product Data Sheet





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](http://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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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  $\mu$ l 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  $\mu$ l 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.*