

# Product Data Sheet

Product Name *3-D Life* Dextran-PEG Hydrogel

Catalog Number G90-1

**Description** The *3-D Life* Dextran-PEG Hydrogel Kit provides reagents for setting up fast gelling, cell-compatible hydrogels. Its major components are maleimide-functionalized dextran (Mal-Dextran) and the crosslinker PEG-Link. When the two reagents are combined, thiol groups on PEG-Link form stable thioether bonds with maleimide groups on the Mal-Dextran, which results in the formation of the gel.








Prior to the crosslinking step, cell adhesion peptides (e.g. *3-D Life* RGD Peptide, Cat. No. 09-P-001) can be covalently attached to a portion of the maleimide groups of Mal-Dextran to provide a cell-adhesive matrix.

Dextran hydrogels can be dissolved by the addition of dextranase (*3-D Life* Dextranase, Cat. No. D10-1), which allows the recovery of chemically fixed or live cells for post-culture analyses (e.g. RT-PCR) or for further cultivation.

For instructions, please consult the General Protocol GP-1 "Preparation of *3-D Life* Fast Gelling Hydrogels" and the *3-D Life* Hydrogels User Guide on [www.cellendes.com](http://www.cellendes.com).

**Quantity** Allows formation of up to 2 ml *3-D Life* Hydrogel depending on the grade of stiffness of the gel.

## Components

Material	Quantity	Concentration of reactive groups	Storage
 Mal-Dextran <sup>#</sup> , lyophilized	170 µl*	30 mmol/L*	Lyophilisate and after reconstitution: -80°C.
 PEG-Link, lyophilized	200 µl*	20 mmol/L*	Lyophilisate and after reconstitution: -20°C to -80°C
 10x CB (pH 5.5)	200 µl	n.a	Short term (≤2 months): 4°C Long term: -20°C to -80°C
 10x CB (pH 7.2)	200 µl	n.a.	Short term (≤2 months): 4°C Long term: -20°C or lower
 Thioglycerol	180 µl	20 mmol/L	-20°C or lower
 Dextranase	500 µl	>4000 units/mL	Short term (≤6 months): 4°C Long term: -80°C (avoid frequent freeze-thawing)
 Water	2x 1500 µl	n.a	Room temperature or lower

All materials are filter-sterilized.

<sup>#</sup>Keep on ice while in use.

\*Volume/concentration after reconstitution of lyophilisate.

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Reconstitution    Mal-Dextran:

1. Briefly centrifuge vial containing the lyophilized Mal-Dextran to make sure that the entire material is at the bottom of the centrifuge tube.
2. Add 175  $\mu\text{l}$  *3-D Life* Water for a concentration of 30 mmol/L maleimide groups.
3. Close tube and briefly vortex.
4. Place centrifuge tube on ice for 5 min.
5. Briefly vortex and centrifuge again.
6. Mal-Dextran is now ready for use. Keep on ice.

PEG-Link:

1. Briefly centrifuge vial containing the PEG-Link lyophilisate to make sure that the entire material is at the bottom of the reaction tube.
2. Add 188  $\mu\text{l}$  *3-D Life* Water per tube for a concentration of 20 mmol/L thiol groups. This results in a 200  $\mu\text{l}$  PEG-Link solution.
3. Close tube and briefly vortex.
4. Incubate for 5 min.
5. Briefly vortex and centrifuge again.
6. PEG-Link is now ready for use.

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