

Product Data Sheet



Product Name *3-D Life* PVA-CD Hydrogel FG

Catalog Number FG81-1

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

CD-Link is composed of polyethylene glycol and a matrix metalloprotease (MMP)-cleavable peptide (Pro-Leu-Gly-Leu-Trp-Ala). 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 hydrogel, if they express the indicated MMPs. In most cases cell spreading and migration also requires the presence of adhesion peptides.

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-PVA to provide a cell-adhesive matrix.

For more information and 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.

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

Components

Material	Quantity	Concentration of reactive groups	Storage
● Mal-PVA [#]	170 µl	30 mmol/L	-80°C (avoid frequent freeze-thawing)
● CD-Link, lyophilized	200 µl*	20 mmol/L	Lyophilisate and after reconstitution: -20°C to -80°C
● 10 x CB (pH 5.5)	200 µl	n.a	Short term (≤2 months): 4°C Long term: -20°C to -80°C
○ Water	2x 1500 µl	n.a	Room temperature or lower

All materials are filter-sterilized.

[#]Keep on ice while in use.

*Volume/concentration after reconstitution of lyophilisate.

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Reconstitution 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 μ 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.

References [1] Knight, C. G. et al. FEBS 296:263-66 (1992)

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