Qkine FGF2 DISCs - Standard
Product Information Sheet

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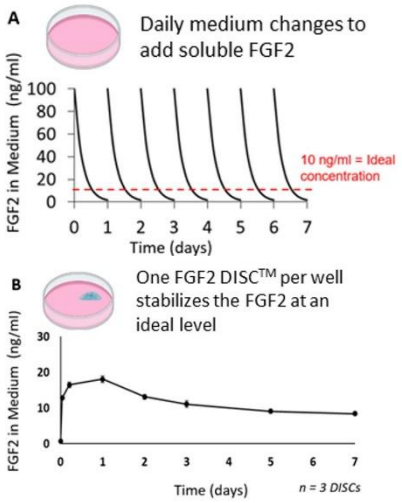
Product Description

Qkine FGF2 DISCs™ are inert, non-degradable, biocompatible hydrogels that release defined levels of native FGF2 stably into culture medium over the course of one week. Qkine FGF2 DISCs™ are loaded with StemBeads® Qkine FGF2, PLGA microbeads that encapsulate FGF2 (Qk025, Qk027)as controlled-release technology. Qkine FGF2 DISCs™ are easy to add and remove, giving scientists enhanced control of growth factor levels in their cultures. Controlled delivery and stable levels overcome the 4.5 hour half-life (Figure 1) of FGF2 and improve cell cultures while saving researchers valuable time and resources.

Qkine FGF2 DISCs™ have been tested in medium such as mTeSR™, mTeSR™ Plus, StemFlex™, Essential 8™, and neuronal medium with enhanced cellular profiles. Qkine FGF2 DISCs™ can be combined with other StemCultures products.

Figure 1



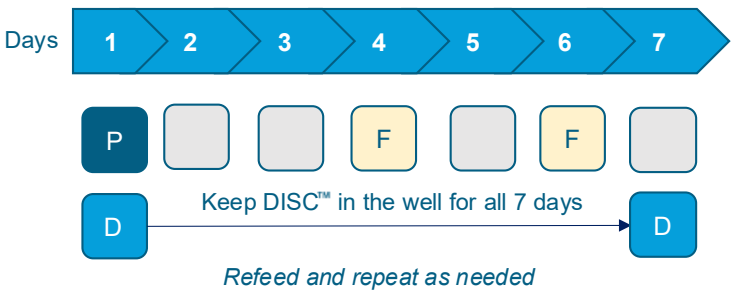
Product Information

Catalog #	Product Name	Storage	Expiration	DISC™ Size	Recommended Well/Plate Size
Qk-DSC500S, Qk-DSC500-48	Qkine FGF2 DISC™ (Standard)	4°C	6 months from manufacture (see label)	2-3 mm diameter, dry 5-6 mm diameter, rehydrated	6 well, 12 well

Suggested Protocol for Use in Pluripotent Stem Cell (PSC) Cultures

1. Using aseptic cell culture technique, wipe DISC™ container with 70% ethanol and place into a biosafety cabinet before opening.
2. Passage cells and add culture medium to wells.
3. Using sterile forceps, transfer each DISC™ into a culture well containing 2 mL of medium (see Release Data section on page 2 for more information on release and adjustments).
   Note: As DISCs™ rehydrate, they will swell and become transparent. Embedded StemBeads® will be visible under a microscope. An image of a DISC™ under a microscope is on page 2 for reference.
4. Every 2-3 days, replace only the medium (use a low powered vacuum or a pipette), leaving the original DISC™ in the well.
5. After about 7 days total, passage cells into a new culture dish and add a new DISC™. The old DISC™ can be removed using a low powered vacuum + pipette tip.

Recommended Culture Schedule



P: Passage Cells | F: Feed | D: Add/Replace DISC

Note: Different celllines, culture densities, and media may require adjustedschedules

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Release Data

StemCultures offers two product sizes to accommodate standard culture plate sizes and to allow more flexibility with the DISC™ release. We recommend a release of 10 ng/mL when culturing iPSCs. However, to fit other needs, the release can be adjusted slightly based on the amount of medium and the number of DISCs™ that are added. See the chart below for reference.

DISC™ Size	Volume of Medium Added	Number of DISCs™ per well	Release in Volume of Medium Added	Example Plate Size
Standard	2 mL	1	10 ng/mL	6 well
Standard	1 mL	1	20 ng/mL	12 or 24 well
Standard	0.5 mL	1	40 ng/mL	24 well
Standard	2 mL	2	20 ng/mL	6 well
Standard	2 mL	3	30 ng/mL	6 well
Standard	2 mL	4	40 ng/mL	6 well

Visual of DISCs™ in Culture

Qkine FGF2 DISCs™ will become transparent when rehydrated. Cells under the DISC™ and the embedded StemBeads® will be visible under a microscope as seen in Figure 2 below.

Figure 2