# Qkine FGF2 DISCs - Mini
## Product Information Sheet

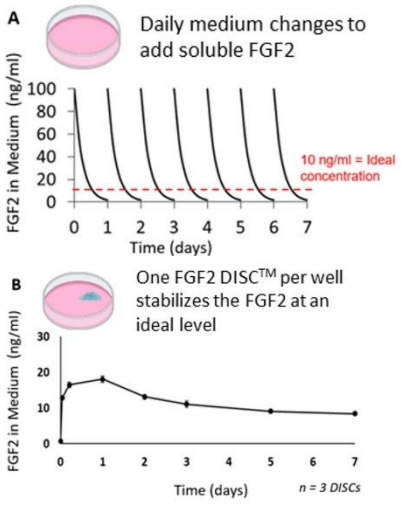
StemCultures | +1 518 621 0848 | support@stemcultures.com | www.stemcultures.com | www.qkine.com

### Product Description

Qkine FGF2 DISCs™ are inert, non-degradable, biocompatible hydrogels that release defined levels of FGF2 stably into culture medium over the course of one week. Qkine FGF2 DISCs™ are loaded with StemBeads® Qkine FGF2 (Qk-SB500), 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**



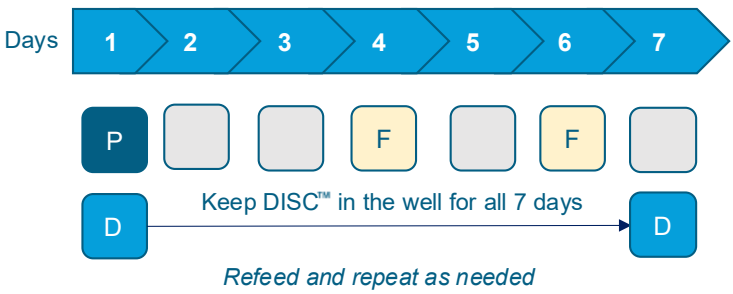

### Product Information

| Catalog # | Product Name | Storage | Expiration | DISC™ Size | Recommended Well/Plate Size |
|---|---|---|---|---|---|
| Qk-DSC505-48 | Qkine FGF2 DISC™ (Mini) | 4°C | 6 months from manufacture (see label) | 1-2 mm diameter, dry<br>3-4 mm diameter, rehydrated | 24 well, 48 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 1 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 |
|---|---|---|---|---|
| Mini | 1 mL | 1 | 10 ng/mL | 24 or 48 well |
| Mini | 0.5 mL | 1 | 20 ng/mL | 24 or 48 well |
| Mini | 0.25 mL | 1 | 40 ng/mL | 24 or 48 well |
| Mini | 1 mL | 2 | 20 ng/mL | 24 or 48 well |
| Mini | 1 mL | 3 | 30 ng/mL | 24 or 48 well |
| Mini | 1 mL | 4 | 40 ng/mL | 24 or 48 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**