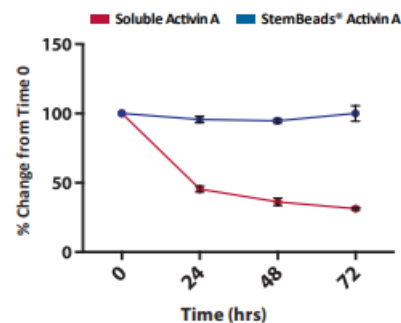


### Product Description

StemBeads® Activin A is a patented growth factor supplement that offers a novel way to culture cells with Activin A more efficiently, with greater control and fewer medium changes. Activin-A can be used to maintain pluripotent stem cells as well as differentiate them to different lineages such as endoderm. StemBeads® Activin A are microbeads composed of an FDA approved, biodegradable PLGA polymer that is loaded with recombinant human Activin A and release the encapsulated protein at a constant rate. Controlled delivery and stable levels overcome the short half-life (Figure 1) of Activin A and improve cell cultures while saving researchers valuable time and resources.

StemBeads® Activin A has been tested on endoderm differentiation medium with enhanced cellular profiles. StemBeads® Activin A can be used in combination with other StemBeads®, including StemBeads® FGF2.

**Figure 1**



### Product Information

Catalog #	Product Name	Storage	Expiration	Average Particle Size	Reconstitution
SBAC1, SBAC5	StemBeads® Activin A	4°C	6 months from manufacture (see label)	45 ± 25 µm diameter	Ready-to-use solution in DMEM/F12

### Directions for Use:

#### Preparation of Media with StemBeads® Activin A

1. Mix vial of StemBeads® Activin A thoroughly by vortexing or pipetting prior to use.
2. Add 10 µL of StemBeads® Activin A per 1 mL of medium. This will provide cells with stable 10 ng/mL Activin A. See back for additional release data.

#### Culturing with StemBeads® Activin A

1. Follow your typical culturing or differentiation protocols.
2. In place of using soluble Activin A, mix media containing StemBeads® Activin A well and plate into culture dish.
3. When needed, remove media from culture dish and wash twice with DMEM. Alternatively, PBS, F12 or basal medium can also be used to wash.
4. Change media every 2-3 days depending on cell density and culture conditions.
5. Repeat passage and feed as needed.

Note: Washing is highly recommended prior to each feed to remove cell debris and remaining beads.

### Release Data

StemBeads® Activin A release in media can be adjusted slightly based on the amount of StemBeads® added or the amount of medium used. We recommend a release of 10 ng/mL, however, to fit other needs, the release can be adjusted slightly. See the chart below for reference.

Volume of StemBeads® Activin A	Volume of Media Added	Activin A Release in Volume of Medium Added
5 µL	1 mL	5 ng/mL
10 µL	1 mL	10 ng/mL
20 µL	1 mL	20 ng/mL
100 µL	1 mL	100 ng/mL
10 µL	0.5 mL	20 ng/mL
10 µL	1 mL	10 ng/mL
10 µL	2 mL	5 ng/mL