



Fibroblast Reprogramming Reagent Kit (SB/XAV)

Item No. 502888

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GENERAL INFORMATION

Materials Supplied

Item No.	Item Name	Quantity/Size	Storage
13031	SB-431542 (hydrate)	1 vial/5 mg	-20°C
13596	XAV939	1 vial/5 mg	-20°C

If any of the items listed above are damaged or missing, please contact our Customer Service department at (800) 364-9897 or (734) 971-3335. We cannot accept any returns without prior authorization.



WARNING: THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Safety Data

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

Precautions

Please read these instructions carefully before beginning this assay.

If You Have Problems

Technical Service Contact Information

Phone: 888-526-5351 (USA and Canada only) or 734-975-3888

Email: techserv@caymanchem.com

In order for our staff to assist you quickly and efficiently, please be ready to supply the lot number of the kit (found on the outside of the box).

Storage and Stability

This kit will perform as specified if stored as directed in the **Materials Supplied** section (see page 3) and used before the expiration date indicated on the outside of the box.

Materials Needed But Not Supplied

1. Cell culture-grade DMSO

INTRODUCTION

Description

The components of this kit can be combined to produce the small molecule cocktail SB/XAV. When mixed with the appropriate cell culture media, SB/XAV promotes reprogramming of cardiac fibroblasts into induced cardiomyocyte-like cells *in situ*.¹ SB-431542 is a potent and selective inhibitor of TGF- β and downregulates fibroblast gene expression. XAV939 is a Wnt signaling inhibitor that activates cardiac gene expression.

Each component in this kit is provided separately, and instructions are included to reconstitute these reagents for direct dilution into cell culture media. For fibroblast reprogramming, maximum efficiency has been achieved by adding SB-431542 into cell culture media after 24 hours and XAV939 after 48 hours.¹ The kit is intended to supplement up to 3 L of culture media when following the supplied instructions. Some reagents may be provided in excess and may be properly disposed of after cell media preparation. Prior to use, reagents must be stored as instructed at -20°C.

Reagent Preparation

Preparation of Individual Stock Solutions

1. Prepare a 26 mM (10,000X) stock solution of SB-431542 by adding 500 μ l of sterile DMSO to the vial and vortexing until fully dissolved. The SB-431542 solution may be diluted in cell culture media to a final concentration of 2.6 μ M.
2. Prepare a 50 mM (10,000X) stock solution of XAV939 by adding 320 μ l of sterile DMSO to the vial and vortexing until fully dissolved. The XAV939 solution may be diluted in cell culture media to a final concentration of 5 μ M.
3. Upon addition of all reagents, sterile filtering the final prepared media formulation is recommended prior to use.

NOTE: Concentrated stock solutions may be stored at -20°C for up to one month, avoiding multiple freeze-thaw cycles. Sterile filtration may be required upon dilution in media.

References

1. Mohamed, T.M.A., Stone, N.R., Berry, E.C., *et al.* Chemical enhancement of *in vitro* and *in vivo* direct cardiac reprogramming. *Circulation* **135**, 978-995 (2017).

NOTES

Warranty and Limitation of Remedy

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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