

CellPlayer™ Angiogenesis StemKit VEGF/Suramin Supplement Kit

Essen BioScience Catalog Number: 4509

Presentation and Storage

The CellPlayer Angiogenesis StemKit VEGF/Suramin Supplement Kit is composed of two vials; 1) VEGF (500 μ L) is supplied at a concentration of 2 μ g/mL in PBS containing 0.1% BSA, and 2) suramin (200 μ L) is provided at a concentration of 2mM in growth media. This kit is shipped on dry ice and, if stored at -20 °C, is stable until expiration date indicated on the respective vials. When stored at 4 °C the shelf life is 2 weeks from date of thaw.

Background and Intended Use

The CellPlayer Angiogenesis StemKit VEGF/Suramin Supplement Kit contains VEGF and suramin, which are known to have opposite effects on angiogenesis. Suramin, among other activities, is a known inhibitor of angiogenesis that is believed to occur by blocking growth factor binding to its cognate receptor. VEGF is a well-characterized growth factor known to maintain blood vessel development and has been shown to promote angiogenesis.

Biological Activity

The Suramin and VEGF preparations included in the VEGF/Suramin Supplement Kit have been validated for use with the Angiogenesis *StemKit* and effects have been shown to be concentration dependent.

Recommended Use

VEGF

We recommend that VEGF be used at a final concentration of 20ng/mL (1:500 dilution of stock), diluted in StemKit assay medium, and added directly to the cells in culture. The amount of VEGF supplied is sufficient to feed the entire plate for at least two feedings. To make up sufficient reagent for feeding following seeding (**neoangiogenic mode**) of ECFC at the 2x working concentration for an entire plate, **add 220 μ L to 11mL assay media** (add 0.1mL 2x bFGF per well). For **established mode**, a 1x concentration is sufficient, **adding 220 μ L to 22mL assay media** (add 0.2mL 2x bFGF per well).

Suramin

We recommend that suramin be used at a final concentration of 100 μ M (1:20 dilution of stock), diluted in assay medium **containing 20ng/mL VEGF**, and added directly to the cells in culture. Due to the low endogenous tube formation in basal media alone, to observe Suramin-mediated inhibition of angiogenesis it must be added in the presence of growth factor. The amount of suramin supplied is sufficient to feed **four wells** at 100 μ M for at least two feedings. Following ECFC seeding, to make up sufficient reagent at the 2x working concentration for four wells, add 50 μ L to 0.5mL growth media + 40ng/mL VEGF (2x). Add 0.1mL 2x Suramin/VEGF per well.

For the full effects to be observed, the reagents should be added with every change of media throughout the course of the assay.

**MSDS Information****VEGF**

MSDS information can be found at:

http://essenbioscience.com/documents/Essen_CellPlayer_Angiogenesis_Human_VEGF_MSDS.pdf

Suramin

MSDS information can be found at:

http://essenbioscience.com/documents/Essen_CellPlayer_Angiogenesis_Suramin_MSDS.pdf

For additional information including a simplified description of the protocol and an extensive application note, please visit our webpage at http://www.essenbioscience.com/angiogenesis_stemkit.html.

For a detailed protocol including use of the CellPlayer™ Angiogenesis StemKit, as well as additional information, please contact Essen BioScience at: sales@essenbio.com.

For research use only. Not for therapeutic or diagnostic use.

