

Product Information

vivoSIS[®] Cell Culture Inserts (Rough Side Up)

Product Number **V5138 and V5388**

Storage Temperature 2-8 °C

Product Description

vivoSIS cell culture inserts are extracellular matrix substrates mounted in a plastic ring. The inserts are fully hydrated and packaged in purified water. The material contains growth factors, proteoglycans, glycoproteins, glycoaminoglycans, and at least three types of collagen (Types I, III and V). The inserts are not synthetic, but a naturally-occurring extracellular matrix derived from porcine small intestine.

NOTE: The matrix in these inserts has two different sides. One side is rough and has high porosity, and the other side is smooth and has low porosity. These inserts have the high porosity side facing upward in the plastic frame. Cells cultured on the rough side often migrate into the matrix while cells cultured on the opposite side often exhibit monolayer and poly-layer formation. The plastic frame for the insert is orange.

The vivoSIS cell culture inserts have been used for various cell culture applications. They provide a hydrated extracellular matrix for culturing cells. They can be used as a substrate for cell differentiation and cell proliferation, with a variety of primary and immortal cell lines. The inserts have an 8-mm diameter membrane area and an outer diameter of 13.5 mm. The inserts are provided in different lengths. The shorter inserts can be used in the opposite orientation and floated in cell culture media. The inserts are designed to fit easily into a single well of a 24-well culture plate.

Each lot has been tested for the absence of bacteria, fungi and mycoplasma.

vivoSIS material has been tested and shown to contain < 0.1 EU/g (Limulus Amoebocyte Lysate Assay).

vivoSIS cell culture inserts are aseptically packaged in a sealed pouch.

Storage/Stability

Store vivoSIS cell culture inserts at 2-8 °C. See package label for expiration date.

Instructions for Use

Use aseptic technique when handling. Each insert is wet and aseptic, but will dehydrate if not kept hydrated. Dehydration and rehydration are not recommended because the cycle changes the physical structure of the disks. Equilibrate the vivoSIS inserts to culture conditions by rinsing in at least two changes of PBS, pH 7.4, serum-free medium or other physiologic buffers. Immediately prior to the application of cells to the vivoSIS matrix, remove the equilibration solution. Harvest cells in complete medium and seed at the desired density. Incubate culture wells under the appropriate environmental conditions. Change the medium 2-3 times weekly or as needed. At desired times, the substrate and associated cells can be fixed and cross-sectioned for histological examination. Labeling techniques may also be used in conjunction with light, fluorescence or confocal microscopy to obtain topographical and three-dimensional information.

Precautions and Disclaimer

After use, dispose of material according to applicable state and federal regulations. Do not allow residues to come into contact with ruminating animals or swine.

The inserts are not for use in humans or *in vitro* diagnostics.

References

1. Badylak, S. F., et al., Small intestinal submucosa: a substrate for *in vitro* cell growth. J. Biomater. Sci. Polym. Ed., **9**, 863-878 (1998).
2. Zhang, Y, et al., Coculture of bladder urothelial and smooth muscle cells on small intestinal submucosa: potential applications for tissue engineering technology. J. Urol., **164**, 928-934 (2000).

3. Badylak, S, et al., Endothelial cell adherence to small intestinal submucosa: An acellular bioscaffold. *Biomaterials*, **20**, 2257-2263 (1999).
4. Peel, S. A. F, et al., Formation of a SIS-cartilage composite graft *in vitro* and its use in the repair of

articular cartilage defects. *Tissue Eng.*, **4**, 143-155(1998).

Manufactured for Sigma by Cook Biotech Inc.

JWM 03/02

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.