

StemBioSys CELLvo Matrix: Frequently Asked Questions And Answers



Q: What cells can be grown on CELLvo™ Matrix or CELLvo XF-Matrix?

CELLvo™ Matrix was originally designed for the isolation and expansion of MSCs. Current studies have shown that the matrix could be used for a variety of mammalian adherent cells. StemBioSys is continuing to add to the list of cells that perform well on **CELLvo Matrix**. If you have a question about your specific cell type call SBS technical service or ask your local rep.

Q: How do you use CELLvo™ Matrix or CELLvo™ XF-Matrix?

A simple rehydration step is required for either product. Plates/flasks are rehydrated using PBS or media. The volume varies and is included in the Product Specifications. Once the reagent is added, incubate the plate/flask for 45-minutes to an hour. Wash the plate 2X with PBS or media and then add your cell of interest. Culture cells according to the manufacturer's instructions.

Q: How many plates or flasks come in a single sleeve?

CELLvo™ Matrix arrives 5 units to a sleeve for all sizes. This is the minimum order.

Q: Can individual units of CELLvo™ Matrix be used more than once?

No. **CELLvo™ Matrix** is a single use substrate.

Q: Is the CELLvo™ Matrix product Xeno-free?

We have two versions of the **CELLvo™ Matrix**, one is produced with FBS and the other (**CELLvo™ XF-Matrix**) is produced xeno free. The matrices are functionally equivalent.

Q: Can I use CELLvo Matrix to isolate or grow cells that I did not purchase from StemBioSys®?

Yes. A variety of mammalian adherent cells can be isolated or grown on the either CELLvo™ Matrix or CELLvo™ XF-Matrix. They do not have to be purchased from StemBioSys.

Q: Do I need to use a special media to use CELLvo™ Matrix?

No. You can use the media you are currently using for your cell type.

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Q: How are cells removed from CELLvo™ Matrix?

Enzymatic digestion by trypsin or collagenase is generally effective. Depending on the cell type, some optimization may be necessary.

Q: How thick is CELLvo™ Matrix?

The thickness of the matrix will vary but should be in the range of 5-40 micrometers.

Q: Is the CELLvo™ Matrix robust enough to manipulate?

No. CELLvo™ Matrix is a protein complex secreted by cells and is fragile.

Q: What is the value of CELLvo™ Matrix versus other comparable products?

CELLvo™ Matrix is a naturally produced biomimetic substrate. Cells cultured on **CELLvo™ Matrix** are more responsive to stimuli, because they are not “busy” responding to a foreign microenvironment. This cannot be reproduced by 2D culture or by the combination of one or more matrix proteins to be coated onto traditional plates. In short, cells cultured on the matrix respond to experimental variables rather than an artificial substrate.

Q: Given that CELLvo Matrix is produced using human donors, is there variability between the lots?

Studies on file have shown that lot-to-lot variability is much less for cells grown on **CELLvo™ Matrix** versus cells grown on other comparable products. StemBioSys® maintains rigid criteria for donors and each lot is quality tested for enhanced performance compared to standard tissue culture plastic.

Q: How many proteins make up the CELLvo™ Matrix?

Being cell derived, the ECM protein present in **CELLvo™ Matrix** is very complex. Research studies on this product by other laboratories have exhibited > 100 proteins present.

Q: Is CELLvo™ Matrix fully characterized?

As the matrix is produced by human stem cells, some batch to batch variation is expected. However, while exact concentrations of specific proteins may vary, the same proteins are consistently found to be the most abundant. Moreover, our quality assurance testing ensures that we see a similar positive impact on the culture of adult stem cells in every batch.

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Q: How does the CELLvo™ Matrix influence cell behavior and motility?

The influence that **CELLvo™ Matrix** has on a cell will depend on the cell type.

For MSCs, **CELLvo™ Matrix** increases cell proliferation and motility and decreases ECM protein synthesis.

Q: Is CELLvo™ Matrix like a 3-dimensional matrix?

There is some topography to the matrix as it has a thickness of approximately 5-40 micrometers (1-4 cell layers thick).

Q: What plane (on the matrix) are the cells located?

This depends on the cell type. Some cells will migrate and proliferate on the surface of the matrix while others will do so within or under the matrix.

Q: From what type of cells is the CELLvo™ Matrix derived?

CELLvo™ Matrix is produced by bone marrow stromal cells derived from healthy human subjects however **CELLvo Matrix** is not limited to use with only bone marrow MSCs. The matrix shares similar motifs with many other cell-derived matrices and therefore is recommended for use with many mammalian adherent cell types.

Q: How long can you culture cells on CELLvo™ Matrix?

The amount of confluence will depend on the cell type.