Exosome-Depleted FBS

**Get the cell culture performance you demand without compromising your results**

**An ultrapure FBS that provides the highest level of exosome depletion and cell culture performance available**

 Fetal bovine serum (FBS) is a major ingredient needed for culturing cells. However, it naturally contains high levels of endogenous exosomes, which interfere with the study of exosomes derived from cultured cells. We have developed a complex manufacturing process that eliminates ≥90% of the endogenous exosomes from FBS, while not compromising cell growth. Now you can reduce background signal, isolate highly pure exosomes secreted by cells, and eliminate guessing whether your homemade exosome-depleted FBS is performing the way you want it to. Want to spend more time generating results rather than questioning them? Gibco™ Exosome-Depleted FBS has the highest level of exosome depletion compared to homebrewed material and competitor FBS (Figure 2)—and it performs without compromising cell growth (Figure 3).

Lot-to-lot consistency from the recognized leader in quality We test every lot of our new Exosome-Depleted FBS for exosome depletion and culture performance, in addition to the strict quality control procedures we already perform on all of our FBS.

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Reduce variability and improve results every time with the best-performing exosome-depleted FBS available, offering:

• ≥90% depletion of exosomes, highest level of depletion on the market • Complex manufacturing process that retains the nutrients your cells need • Cell culture testing of every lot • Full quality testing including: sterility, mycoplasma, performance and endotoxin • Specially developed for exosome research

“I was able to culture my cells and get very good growth in only 2.5% serum, compared to 10%, due to Gibco Exosome-Depleted FBS, maintaining a lot of the important nutrients (‘the good things’) that were lost during ultracentrifugation.” (see Figure 1 for supporting data)

Dr. Jonathan Gilthorpe Pharmacology and Clinical Neuroscience Umeå University, Sweden



**Figure 1. 72-hour cell growth of rat oligodendrocyte cells with FBS. Rat oligodendrocyte cells** were seeded at 1,000 cells/well in 96-well plates, and grown in medium containing 2% or 10% by volume of one of the following supplements: Gibco Exosome-Depleted FBS (Cat. No. A2720801), source Gibco™ FBS (Cat. No. 26140-079) or ultracentrifuged FBS. After 72 hours in culture, the cells were stained live with Hoechst 33342 (Invitrogen™ Molecular Probes™ Cat. No. H3570), and the plate was imaged and analyzed on a 96-well plate imaging instrument (Trophos PlateRunner HD). Results are presented as the total cell counts as reported by the 96-well plate analysis. (The results were obtained from the laboratory of Dr. Jonathan Gilthorpe in the Department of Pharmacology and Clinical Neuroscience at Umeå University, Sweden.)

**Ordering information**

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**Figure 2. Exosome depletion from FBS samples, as verified by two different *methods.*** *Exosome depletion was verified by analysis on a NanoSight™ instrument (comparing the 30–150 nm count before and after exosome depletion) as well as by a fluorescence-based assay. Briefly, this assay involves extracting exosomes using Invitrogen™ Total Exosome Isolation Reagent (from serum) (Cat. No. 4478360), and then staining the isolated exosomes with Invitrogen™ Molecular Probes™ BODIPY™ TR Ceramide (Cat. No. D-7540). The first two exosome-depleted lots shown above were produced by our proprietary method. Also included were an ultracentrifuged sample and a competitor’s product.*

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***Figure 3. Two-day viability and viable cell density in cell cultures containing exosome-depleted vs. source FBS.*** *Cell lines were grown in basal medium (Gibco™ DMEM, high glucose, GlutaMAX™ Supplement; Cat. No. 10566-016) containing 10% Exosome-Depleted FBS or source FBS, and then assayed for cell viability and viable cell density (VCD) on a ViCELL™ instrument. Results are presented as the viability or VCD that was achieved with Exosome-Depleted FBS as a percentage of that achieved with the undepleted source FBS.*

[*http://www.thermofisher.com/cn/zh/home/life-science/cell-analysis/exosomes.html?cid=fl-exosomes*](http://www.thermofisher.com/cn/zh/home/life-science/cell-analysis/exosomes.html?cid=fl-exosomes) *-*外泌体研究产品

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*统计项目：SBI QIAGEN 外泌体试剂盒提取实验结果。*