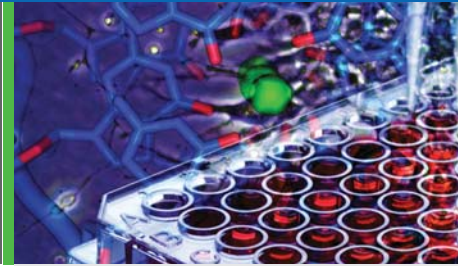


# Exo-FBS™ Exosome-depleted FBS

Study exosomes from cells in culture without interference from fetal bovine serum exosomes in your media



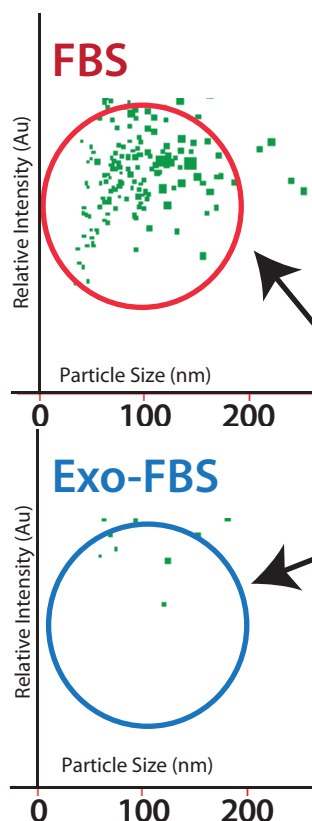
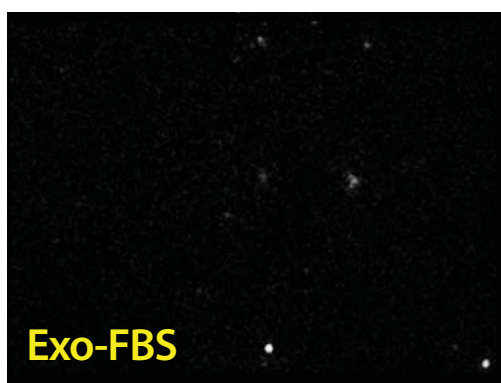
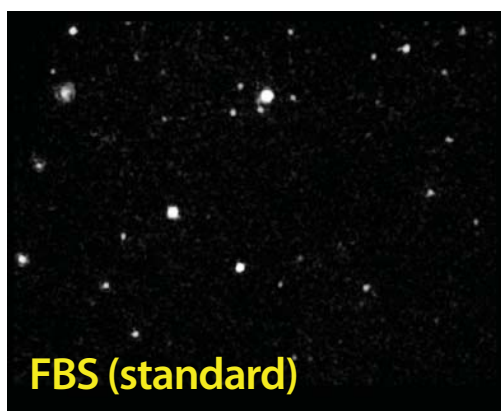
Exosomes are 60 –120 nm membrane vesicles secreted by most cell types *in vivo* and *in vitro*. Exosomes are found in blood, urine, amniotic fluid, malignant ascite fluids, urine and in media from cells in culture. Exosomes contain distinct subsets of microRNAs depending upon the cell type from which they are secreted. Standard growth medium for most cells in culture require fetal bovine serum (FBS) as a growth supplement to DMEM. FBS is derived from bovine (cow) serum and contains a high abundance of cow exosome vesicles. These exosomes can interfere or cause significant background issues when studying the exosomes secreted from your cells of interest in standard culture conditions.

SBI has developed an exosome-depleted FBS growth supplement called Exo-FBS that has been stripped of bovine exosomes. Exo-FBS supports equivalent growth of many types of cells in culture, is devoid of cow CD63 positive exosomes and does not have any measurable bovine microRNAs. Perform your studies of cellular secreted exosomes in culture without the worry of contaminating cow exosomes in your experiments.

## Highlights

- Bovine exosomes are present in standard FBS media supplements
- Exo-FBS has had the CD63 positive cow exosomes removed
- No detectable bovine microRNAs in Exo-FBS media
- Grow your cells the same way with same growth rate as regular FBS
- No cow exosomes to interfere with exosomes from cells in culture

## NanoSight particle analysis of FBS and Exo-FBS



## No more bovine exosomes in your cell media

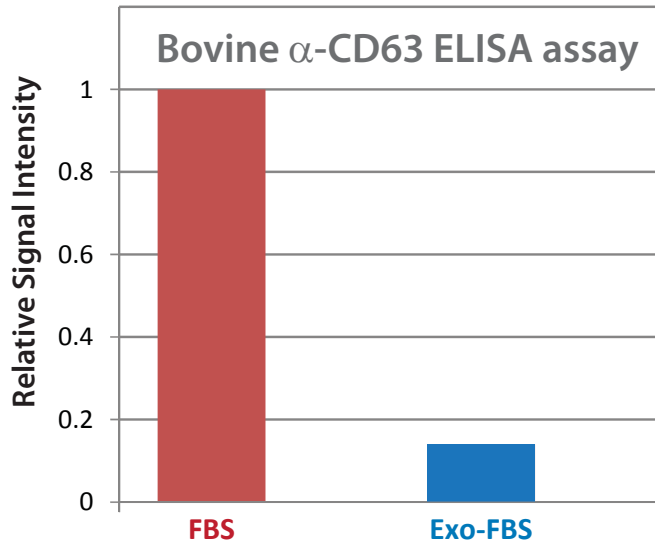
- FBS that has been stripped of CD63 positive cow exosomes
- Exosome-sized vesicles removed
- No detectable cow microRNAs
- Same cellular growth rates supported as standard FBS

## Exosomes Removed

Study exosomes from cell culture without cow exosome interference!

[www.systembio.com/exo-fbs](http://www.systembio.com/exo-fbs)

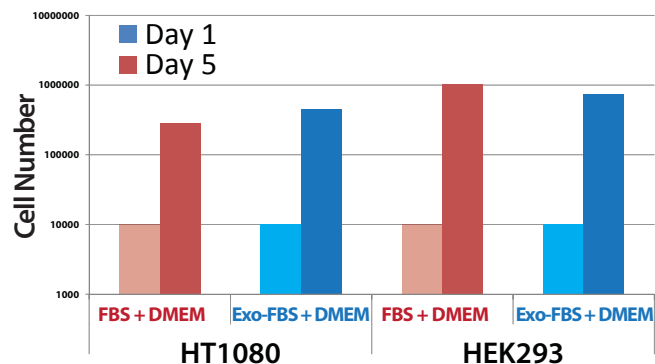
## Exo-FBS is devoid of bovine CD63 exosomes



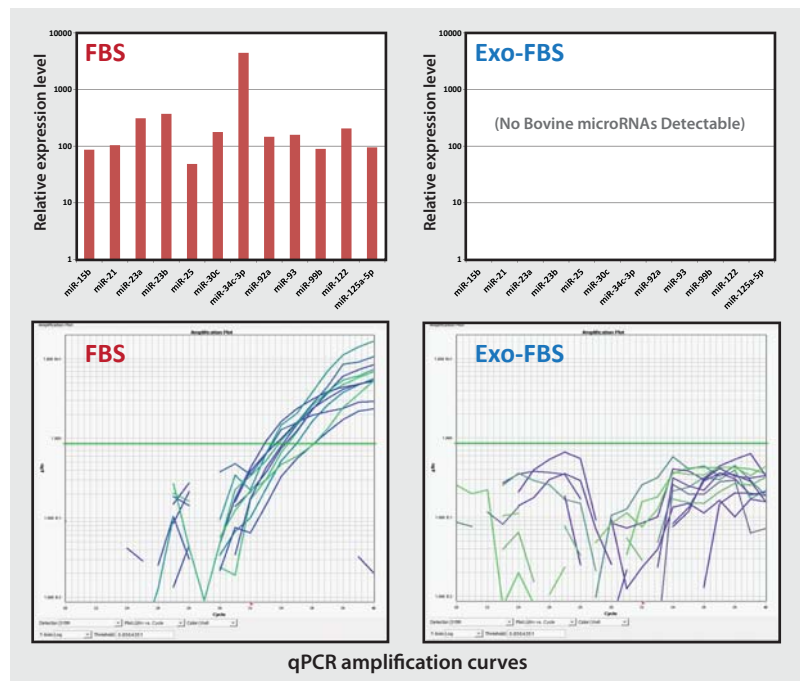
Equal volumes (50 μl) of either standard FBS or Exo-FBS depleted media supplement were used in an ELISA assay. Amounts of CD63-positive bovine exosomes are graphed above and normalized to the signal level of standard FBS.

## Exo-FBS media supports robust growth of cells in culture equal to standard FBS media

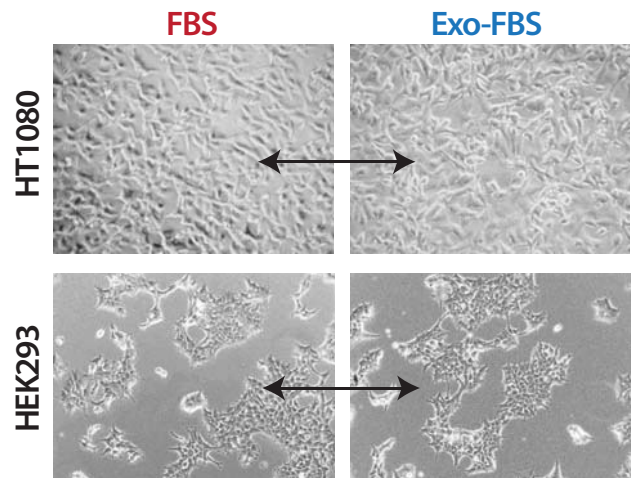
Complete medium either with 10% standard FBS or with 10% Exo-FBS supplement. HT1080 fibrosarcoma cells and HEK293 cells were cultured under standard conditions at 37°C with 5% CO<sub>2</sub> for 5 days in the medium indicated and then imaged for growth numbers and morphologies (right panel). Equivalent growth was observed for FBS and Exo-FBS media tested.



## Bovine microRNAs present in FBS are no longer detectable in Exo-FBS - *No more cow microRNAs!*



Standard FBS and Exo-FBS media supplements (4 ml) were treated with Trizol extraction methods to recover exosome RNAs. RNA was converted to cDNA and 72 individual bovine microRNAs were measured by qPCR using SBI's QuantiMir system. Of the 72 microRNAs tested, 12 yielded amplification curves in the FBS sample but not in the Exo-FBS sample (above).



## We Also Offer Custom Services

System Biosciences offers a wide-range of custom services to support your research, allowing you to spend less time making tools, and more time making discoveries. To learn more, visit our website at [www.systembio.com/service](http://www.systembio.com/service) or call us at 888-266-5066.