FBS Exosome Depletion Kits

CAT. 61100, 61400, 61200, 61300

QUICK AND EASY PROTOCOL FOR THE DEPLETION OF BOVINE EXOSOMES FROM FBS PRIOR TO USING IT AS A GROWTH SUPPLEMENT IN YOUR CULTURE MEDIUM

- Efficient depletion of bovine exosomes from Fetal Bovine Serum
- Deplete exosome-sized vesicles from versatile FBS volumes
- No protease treatment required, no time-consuming ultracentrifugation, no precipitation reagents required, no overnight incubation required
- Exosome depletion confirmed by reduction of bovine miRNAs below detectable levels
- The depleted FBS provides the same cellular growth rates as the standard FBS
- Purification is based on Norgen's proprietary Silicon Carbide resin

NORGEN BIOTEK

ISO 9001:2015 CERTIFIED QUALITY · ISO 13485:2016 CERTIFIED QUALITY · ISO 15189:2022 CERTIFIED QUALITY · GMP

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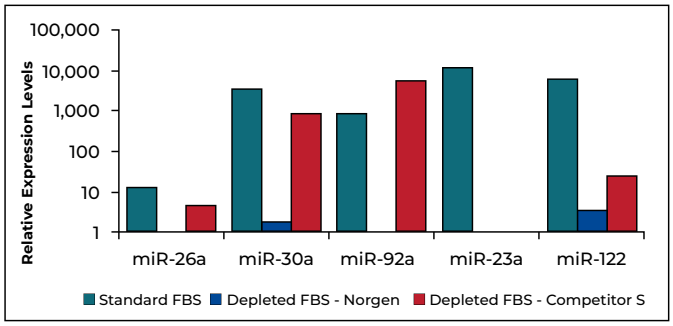
Advantages You Will Bring to Your Lab

A



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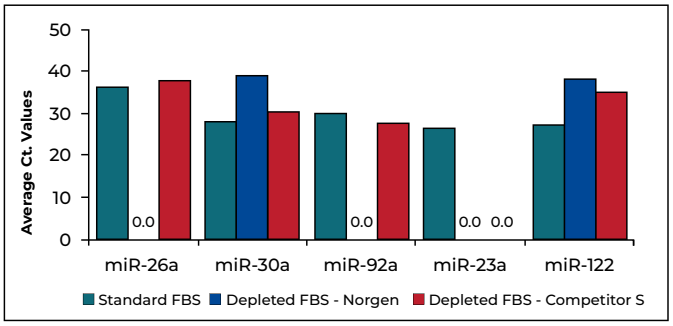


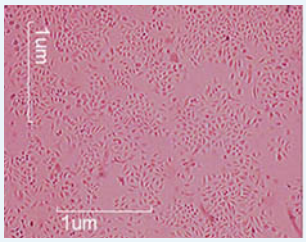
RT-PCR ANALYSIS OF BOVINE MIRNA LEVELS SHOWS DEPLETION OF EXOSOMES USING NORGEN'S SLURRY BASED FBS EXOSOME DEPLETION KIT

Figure 1. Exosome-depleted FBS with Norgen's FBS Exosome Depletion Kits (Slurry Format) has undetectable Bovine miRNA levels. Norgen's FBS Exosome Depletion Kit I (Slurry Format) (Cat# 61100) was used to deplete bovine exosomes from 5mL FBS. Total RNA/miRNA including exosomal RNA was purified from the depleted FBS, non-depleted FBS and a commercially available ready – to – go depleted FBS. Five different bovine microRNAs were assessed by RT-qPCR (miR-26a, miR-30a, miR-92a, miR-23a and miR-122). Three out of the five tested miRNA (miR-26a, miR-92a and miR-23a) didn't show any amplification in the FBS depleted using Norgen's FBS Exosome Depletion Kit I (Slurry Format) whereas the other two miRNAs (miR-30a and miR-122) showed very late Ct. values which appeared to be a primer dimer according to the melt curve.

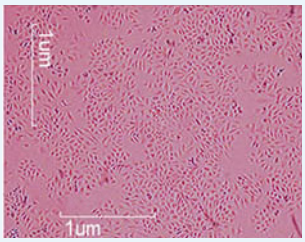
FBS EXOSOME DEPLETION DOESN'T AFFECT CELLULAR MORPHOLOGY AND GROWTH

Figure 2. Growth rates of HeLa cells in media containing Exosome-depleted FBS. Growth rates of HeLa cells in media containing Exosome-depleted FBS using Norgen's FBS Exosome Depletion Kits (Slurry Format) was compared to that in media containing standard FBS. Simply, HeLa cells were seeded in DMEM with either 10% Exosome-depleted FBS using Norgen's Kits or 10% standard FBS and then cultured under standard conditions at 37°C with 5% CO_2 for 3 days. The cells were imaged using Moticam 480 to observe cellular morphology and growth rate. Similar growth and identical cellular morphology were detected for both the Exosome-depleted FBS using Norgen's FBS Exosome Depletion Kits and the standard FBS.

Standard FBS



Depleted FBS Norgen



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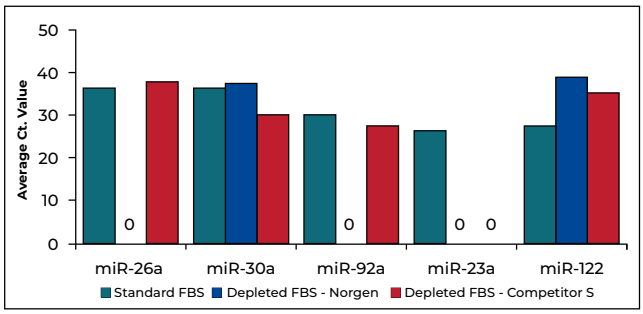

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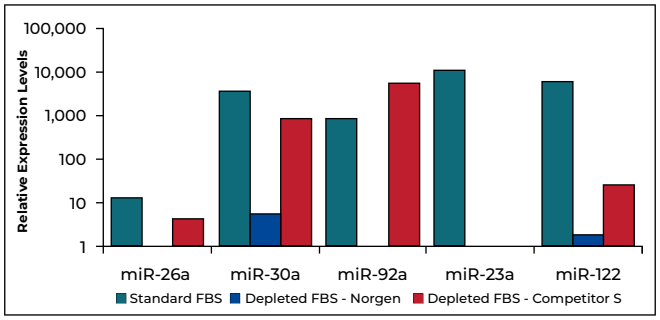

RT-PCR ANALYSIS OF BOVINE MIRNA LEVELS SHOWS DEPLETION OF EXOSOMES USING NORGEN'S COLUMN BASED FBS EXOSOME DEPLETION KIT

Figure 3. Exosome-depleted FBS with Norgen's FBS Exosome Depletion Kits (Column Format) has undetectable Bovine miRNA levels. Norgen's FBS Exosome Depletion Kit I (Column Format) (Cat# 61200) was used to deplete bovine exosomes from 5mL FBS. Total RNA/miRNA including exosomal RNA was purified from the depleted FBS, non-depleted FBS and a commercially available ready – to – go depleted FBS. Five different bovine microRNAs were assessed by RT-qPCR (miR-26a, miR-30a, miR-92a, miR-23a and miR-122). Three out of the five tested miRNA (miR-26a, miR-92a and miR-23a) didn't show any amplification in the FBS depleted using Norgen's FBS Exosome Depletion Kit I (Column Format) whereas the other two miRNAs (miR-30a and miR-122) showed very late Ct. values which appeared to be a primer dimer according to the melt curve.

TECHNICAL SPECIFICATIONS

Description	Specifications
Sample Type	Fetal Bovine Serum
Sample Volume Range	Up to 140 mL (FBS Exosome Depletion Kit I (Slurry Format) Up to 280 mL (FBS Exosome Depletion Kit II (Slurry Format) Up to 120 mL (FBS Exosome Depletion Kit I (Column Format) Up to 240 mL (FBS Exosome Depletion Kit II (Column Format)
Depletion	Deplete exosome-sized vesicle
Bovine miRNA	No detectable bovine miRNA
Time to Complete 6 Purifications	40 minutes

SELECT PUBLICATIONS

Publication Title	Authors	Journal	Year
Excessive activation of IL-33/ST2 in cancer-associated fibroblasts promotes invasion and metastasis in ovarian cancer	Caixia Feng, Li Kou, Panyue Yin, Yuan Jing	Oncology Letters	2022
Tridimensional cell culture of dermal fibroblasts promotes exosome-mediated secretion of extracellular matrix proteins	Vincent Clément, Vincent Roy, Bastien Paré, Cassandra R. Goulet, Lydia Touzel Deschênes, François Berthod, Stéphane Bolduc & François Gros-Louis	Scientific Reports	2022

Ordering Information

Description	Preps	Cat. #
FBS Exosome Depletion Kit I	6 Preps	61100
FBS Exosome Depletion Kit II	12 Preps	61400
FBS Exosome Depletion Kit Column Format	6 Preps	61200
FBS Exosome Depletion Kit Column Format	12 Preps	61300

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