



# Fetal Bovine Serum, ES Cell Qualified

SCRR-30-2020™

## Description

Fetal Bovine Serum, ES Cell Qualified is tested for its ability to support the growth and maintenance of embryonic stem cells in an undifferentiated state.

Undifferentiated embryonic stem cells are determined by colony morphology and expression of three pluripotent markers. The results are compared to a control lot of serum. The serum is triple-filtered through 0.1 µM filters and each lot of fetal bovine serum is tested for sterility. Fetal bovine serum is manufactured from fetal bovine blood collected in USDA-inspected abattoirs located in the United States.

**Volume:** 500 mL

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## Storage Conditions

**Product format:** Frozen

**Storage conditions:** -70°C or colder

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## Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

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## Biosafety Information

ATCC determined that a biosafety level is not applicable to this material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is

your responsibility to complete your own risk assessment and understand any potential hazards associated with the material per your organization's policies and procedures and any other applicable regulations as enforced by your local or national agencies.

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## Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at [www.atcc.org](http://www.atcc.org).

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## Handling Procedures

**General Procedure:** Fetal Bovine Serum, ES Cell Qualified is added to Mouse ES Basal Cell Media to a final concentration of 10 to 15%.

### Thawing

Remove serum from frozen storage and place the bottle(s) overnight in a refrigerator at 2°C to 8°C. When ready for use, transfer the bottle(s) to a 37°C water bath. Gently agitate the bottle(s) periodically in order to mix the solutes that tend to concentrate at the bottom of the bottle. Do not keep serum at 37°C any longer than necessary for it to thaw completely. Alternatively, serum bottles may be placed in a 37°C water bath directly from frozen storage. Do not thaw serum at temperatures above 37°C. Bottles should be agitated by a gentle swirling motion to enhance mixing and thawing.

If you are not using all of your thawed serum at once, dispense it into single-use aliquots and store these at -70°C or -20°C. Protect the aliquots from light as much as possible during storage.

### Serum Precipitates

Turbidity and flocculent material may be present after thawing. ATCC's experience

indicates that neither of these changes affect the performance of serum. If the presence of flocculent material or turbidity is a concern, they can be removed by aseptic filtration through a sterile 0.45 µm filter.

## Heat-Inactivation of Serum

**CAUTION:** Heat-inactivation of serum is usually unnecessary and can be detrimental to the growth of some cells. We strongly recommend that you heat-inactivate fetal bovine serum only if it is required for a particular cell line.

1. Thaw serum following the directions above.
2. Preheat a water bath to 56°C with sufficient water to rise above the level of the serum in the bottle.
3. Mix thawed serum by gently swirling the bottle and then place the bottle in the 56°C water bath. (The temperature of the water bath will decrease.)
4. When the temperature of the water bath reaches 56°C again, heat the serum for an additional 30 minutes. Mix gently every five minutes to ensure uniform heating.
5. At the end of 30 minutes, remove serum from the water bath, cool, and store at -70°C or -20°C (see Storage, above).

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## Quality Control Specifications

**Bacterial and fungal testing:** Not detected

**Mycoplasma contamination:** Not detected

**Virus testing:** Not detected

**Biochemical profile:** See the Certificate of Analysis for lot-specific results

**Endotoxin:** ≤10 EU/mL

**Growth promotion:** Pass

**Hemoglobin:** Report result

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## Material Citation

If use of this material results in a scientific publication, please cite the material in the

following manner: Fetal Bovine Serum, ES Cell Qualified (ATCC SCRR-30-2020)

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## References

References and other information relating to this material are available at [www.atcc.org](http://www.atcc.org).

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## Revision

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## Contact Information

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