

Fetal Bovine Serum

Preliminary Certificate of Analysis

Triple 0.1 µm sterile filtered
Manufactured in Germany

Lot No.: 42020623FBS
Origin: IRELAND
Product Code(s): S-FBS-IR-015, S-FBS-IR-0150, S-FBS-IR-011
Date of Manufacture: 02/2023
Expiry Date: 02/2028
Storage: < -15°C

Physical and Chemical Analysis

Test	Method	Specifications	Results	Units
Identity	Internally Validated	Bovine	Bovine	n/a
Appearance	Visual	Clear yellow-amber Liquid	Clear yellow-amber Liquid	n/a
Specific Gravity	Mass Balance	> 1.01	1.019	g/ml
pH	Electronic pH Meter	6.8 - 8.2	7.23 at 22.2°C	n/a
Osmolality	Osmometer	260 - 340	316	mOsm/kg
Endotoxin	LAL Kinetic	< 10	< 1.0	EU/ml
Free Hemoglobin	Colorimetric	< 25	11.31	mg/dl

Protein Profile

Test	Method	Specifications	Results	Units
Electrophoretic Pattern	Capillary Electrophoresis	Normal	Normal	n/a
Total Protein	IDEXX Catalyst One	3.0 - 4.5	3.7	g/dl
Albumin	IDEXX Catalyst One	1.4 - 3.4	1.67	g/dl
Globulin	IDEXX Catalyst One	0.4 - 2.4	2.03	g/dl
Alpha 1	Capillary Electrophoresis	Test and report	1.57	g/dl
Alpha 2	Capillary Electrophoresis	Test and report	0.28	g/dl
Beta	Capillary Electrophoresis	Test and report	0.15	g/dl
Gamma	Capillary Electrophoresis	Test and report	0.03	g/dl
IgG	ELISA	< 500	In testing	µg/ml

Sterility

Test	Method	Specifications	Results	Units
Sterility	Eur. Ph. 2.6.1	Pass	In testing	n/a
Mycoplasma	qPCR	Not detected	In testing	n/a

Antibiotics

Test	Method	Specifications	Results	Units
Tetracycline	IDEXX Snap Test	Test and report	Not detected	n/a
Oxytetracycline	IDEXX Snap Test	Test and report	Not detected	n/a
Chlortetracycline	IDEXX Snap Test	Test and report	Not detected	n/a

Virus Testing

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Test	Method	Specifications	Results	Units
BVDV/BHV-1/PI-3 (CPE)	Cell Culture	Not detected	In testing	n/a
Rabies Virus	qPCR	Not detected	In testing	n/a
Bluetongue Virus (BTV)	qPCR	Not detected	In testing	n/a
BRSV	qPCR	Not detected	In testing	n/a
Reo Virus	qPCR	Not detected	In testing	n/a
BAV	qPCR	Not detected	In testing	n/a
BoPV-1, 2	qPCR	Not detected	In testing	n/a

Antibody Testing

Test	Method	Specifications	Results	Units
BVDV-1, 2, 3	Detection of Antibodies (ELISA)	Test and report	In testing	n/a
BHV-1	Detection of Antibodies (ELISA)	Test and report	In testing	n/a
PI-3	Detection of Antibodies (ELISA)	Test and report	In testing	n/a

Biochemistry

Test	Method	Specifications	Results	Units
Aspartate Aminotransferase (AST)	IDEXX Catalyst One	Test and report	68	U/L
Alanine Aminotransferase (ALT)	IDEXX Catalyst One	Test and report	30	U/L
Lactate Dehydrogenase (LDH)	IDEXX Catalyst One	Test and report	1778	U/L
Alkaline Phosphatase (ALKP)	IDEXX Catalyst One	Test and report	172	U/L
Gamma-Glutamyl Trans. (GGT)	IDEXX Catalyst One	Test and report	5	U/L
Cholesterol (CHOL)	IDEXX Catalyst One	Test and report	< 0.15	mmol/L
Glucose (GLU)	IDEXX Catalyst One	Test and report	8.59	mmol/L
Urea (BUN)	IDEXX Catalyst One	Test and report	4.1	mmol/L
Creatinine (CREA)	IDEXX Catalyst One	Test and report	259	µmol/L
Uric Acid (URIC)	IDEXX Catalyst One	Test and report	178	µmol/L
Calcium (Ca)	IDEXX Catalyst One	Test and report	3.07	mmol/L
Phosphorus (PHOS)	IDEXX Catalyst One	Test and report	2.87	mmol/L
Total Bilirubin (TBIL)	IDEXX Catalyst One	Test and report	3	µmol/L
Magnesium (Mg)	IDEXX Catalyst One	Test and report	1.31	mmol/L
Sodium (Na)	IDEXX Catalyst One	Test and report	137	mmol/L
Potassium (K)	IDEXX Catalyst One	Test and report	> 10.0	mmol/L
Chloride (CL)	IDEXX Catalyst One	Test and report	100	mmol/L
Triglyceride (Trig)	IDEXX Catalyst One	Test and report	1.41	mmol/L
Iron (Fe)	Colorimetric	Test and report	In testing	µg/dl

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Cell-Culture Test

Cell Line	Method	Specifications	Results
L-929	Morphology	Tested vs. Control Serum ¹	In testing
HELA	Morphology	Tested vs. Control Serum ¹	In testing
MRC-5	Morphology	Tested vs. Control Serum ¹	In testing
L-929	Density	Tested vs. Control Serum ²	In testing
HELA	Density	Tested vs. Control Serum ²	In testing
MRC-5	Density	Tested vs. Control Serum ²	In testing
L-929	Cell Count	Cell count [log ₁₀ /ml]/dead cells [%]	In testing
HELA	Cell Count	Cell count [log ₁₀ /ml]/dead cells [%]	In testing
MRC-5	Cell Count	Cell count [log ₁₀ /ml]/dead cells [%]	In testing

Cell Line	Method	Specifications	Results
BHK-21	Cloning Efficiency - Records results vs. control at day 8th	>75% CE vs. control CE	In testing

Scoring System (vs. Control Serum):

- ¹ 0 cells dead; 1 many degenerated cells, plenty of dead cells; 2 cells partially degenerated; many dead cells; 3 few degenerated cells, some dead cells; 4 all cells ok.
- ² 0 single cells/small colonies; 1 <50% confluent; 2 50 – 90% confluent; 3 confluent; 4 more than confluent

Interpretation:

This document was produced electronically and is valid without a signature.

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