Fetal Bovine Serum

Certificate of Analysis

Triple 0.1 µm sterile filtered
Manufactured in Germany

Lot No.: **53030226FBS**
Origin: **COLOMBIA**
Product Code(s): **S-FBS-CO-015, S-FBS-CO-0150**
Date of Manufacture: **03/2026**
Expiry Date: **03/2031**
Storage: **< -15°C**

Physical and Chemical Analysis

Test	Method	Specifications	Results	Units
Identity	Internally Validated	Bovine	Bovine	n/a
Appearance	Visual	Clear yellow-amber Frozen Liquid	Clear yellow-amber Frozen Liquid	n/a
Specific Gravity	Mass Balance	> 1.01	1.017	g/ml
pH	Electronic pH Meter	6.8 - 8.2	7.42 at 20.7°C	n/a
Osmolality	Osmometer	260 - 340	309	mOsm/kg
Endotoxin	LAL Kinetic	< 10	< 0.2	EU/ml
Free Hemoglobin	Colorimetric	< 25	13.54	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	3.9	g/dl
Albumin	IDEXX Catalyst One	1.4 - 3.4	1.83	g/dl
Globulin	IDEXX Catalyst One	0.4 - 2.4	2.06	g/dl
Alpha 1	Capillary Electrophoresis	Test and report	1.15	g/dl
Alpha 2	Capillary Electrophoresis	Test and report	0.71	g/dl
Beta	Capillary Electrophoresis	Test and report	0.16	g/dl
Gamma	Capillary Electrophoresis	Test and report	0.04	g/dl
IgG	ELISA	< 500	135.6	µg/ml

Sterility

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

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Virus Testing

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

Antibody Testing

Test	Method	Specifications	Results	Units
BVDV-1, 2, 3	Detection of Antibodies (ELISA)	Test and report	Not detected	n/a
BHV-1	Detection of Antibodies (ELISA)	Test and report	Not detected	n/a
PI-3	Detection of Antibodies (ELISA)	Test and report	Not detected	n/a

Biochemistry

Test	Method	Specifications	Results	Units
Aspartate Aminotransferase (AST)	IDEXX Catalyst One	Test and report	56	U/L
Alanine Aminotransferase (ALT)	IDEXX Catalyst One	Test and report	11	U/L
Lactate Dehydrogenase (LDH)	IDEXX Catalyst One	Test and report	1364	U/L
Alkaline Phosphatase (ALKP)	IDEXX Catalyst One	Test and report	273	U/L
Gamma-Glutamyl Trans. (GGT)	IDEXX Catalyst One	Test and report	0	U/L
Cholesterol (CHOL)	IDEXX Catalyst One	Test and report	0.76	mmol/L
Glucose (GLU)	IDEXX Catalyst One	Test and report	3.21	mmol/L
Urea (BUN)	IDEXX Catalyst One	Test and report	5.6	mmol/L
Creatinine (CREA)	IDEXX Catalyst One	Test and report	276	µmol/L
Uric Acid (URIC)	IDEXX Catalyst One	Test and report	110	µmol/L
Calcium (Ca)	IDEXX Catalyst One	Test and report	3.13	mmol/L
Phosphorus (PHOS)	IDEXX Catalyst One	Test and report	2.95	mmol/L
Total Bilirubin (TBIL)	IDEXX Catalyst One	Test and report	5	µmol/L
Magnesium (Mg)	IDEXX Catalyst One	Test and report	1.31	mmol/L
Sodium (Na)	IDEXX Catalyst One	Test and report	135	mmol/L
Potassium (K)	IDEXX Catalyst One	Test and report	>10.0	mmol/L
Chloride (CL)	IDEXX Catalyst One	Test and report	103	mmol/L
Triglyceride (Trig)	IDEXX Catalyst One	Test and report	1.20	mmol/L
Iron (Fe)	Colorimetric	Test and report	149.01	µg/dl

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Cell-Culture Test

Cell Line	Method	Specifications	Results
L-929	Morphology	Tested vs. Control Serum[1]	3/3
HELA	Morphology	Tested vs. Control Serum[1]	3-/3
MRC-5	Morphology	Tested vs. Control Serum[1]	3/3
L-929	Density	Tested vs. Control Serum[2]	3+/3+
HELA	Density	Tested vs. Control Serum[2]	3/3
MRC-5	Density	Tested vs. Control Serum[2]	3/3
L-929	Cell Count	Cell count [log_{10}/ml]/dead cells [%]	6.01/0.00 Vs. 6.05/0.45
HELA	Cell Count	Cell count [log_{10}/ml]/dead cells [%]	5.93/0.00 Vs. 5.86/0.00
MRC-5	Cell Count	Cell count [log_{10}/ml]/dead cells [%]	5.47/0.00 Vs. 5.40/0.00

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

Cell Line	Method	Specifications	Results
BHK-21	Cloning Efficiency - Records results vs. control on day 8th	>75% CE vs. control CE	>99%

Interpretation:
The cell growth using test serum Lot 53030226FBS was comparable to the internal standard serum.
The viability of the cells before trypsinization was similar. Using the test serum all cells displayed good viability and cell growth.

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