

Fetal Bovine Serum

Certificate of Analysis

Triple 0.1 µm sterile filtered
Manufactured in Germany

Lot No.: 48021122FBS
Origin: MEXICO
Product Code(s): S-FBS-MX-015
Date of Manufacture: 02/2022
Expiry Date: 02/2027
Storage: < -15°C

Physical and Chemical Analysis

Test	Method	Specifications	Results	Units
Identity	Internally Validated	Bovine	Bovine	n/a
Appearance	Visual	Clear yellow-amber	Clear yellow-amber	n/a
Specific Gravity	Mass Balance	> 1.01	1.017	g/ml
pH	Electronic pH Meter	6.8 - 8.2	7.35 at 24.3°C	n/a
Osmolality	Osmometer	260 - 340	314	mOsm/kg
Endotoxin	LAL Kinetic	< 10	< 0.3	EU/ml
Free Hemoglobin	Colorimetric	< 25	11.42	mg/dl

Protein Profile

Test	Method	Specifications	Results	Units
Total Protein	IDEXX Catalyst One	3.0 - 4.5	3.98	g/dl
Electrophoretic Pattern	Capillary Electrophoresis	Normal	Normal	n/a
Albumin	IDEXX Catalyst One	1.4 - 3.4	1.75	g/dl
Globulin	IDEXX Catalyst One	0.4 - 2.4	2.05	g/dl
IgG	ELISA	< 500	223.0	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
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	39	U/L
Alanine Aminotransferase (ALT)	IDEXX Catalyst One	Test and report	< 10	U/L
Lactate Dehydrogenase (LDH)	IDEXX Catalyst One	Test and report	1476	U/L
Alkaline Phosphatase (ALKP)	IDEXX Catalyst One	Test and report	201	U/L
Gamma-Glutamyl Trans. (GGT)	IDEXX Catalyst One	Test and report	4	U/L
Cholesterol (CHOL)	IDEXX Catalyst One	Test and report	0.79	mmol/L
Glucose (GLU)	IDEXX Catalyst One	Test and report	3.69	mmol/L
Urea (BUN)	IDEXX Catalyst One	Test and report	4.9	mmol/L
Creatinine (CREA)	IDEXX Catalyst One	Test and report	312	µmol/L
Uric Acid (URIC)	IDEXX Catalyst One	Test and report	112	µmol/L
Calcium (Ca)	IDEXX Catalyst One	Test and report	3.52	mmol/L
Phosphorus (PHOS)	IDEXX Catalyst One	Test and report	2.72	mmol/L
Total Bilirubin (TBIL)	IDEXX Catalyst One	Test and report	2	µmol/L
Magnesium (Mg)	IDEXX Catalyst One	Test and report	1.39	mmol/L
Sodium (Na)	IDEXX Catalyst One	Test and report	141	mmol/L
Potassium (K)	IDEXX Catalyst One	Test and report	> 10	mmol/L
Chloride (CL)	IDEXX Catalyst One	Test and report	104	mmol/L
Triglyceride (Trig)	IDEXX Catalyst One	Test and report	0.78	mmol/L
Iron (Fe)	Colorimetric	Test and report	161.4	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 [%]	6.33/0.6 vs. 6.33/0
HELA	Cell Count	Cell count [log ₁₀ /ml]/dead cells [%]	5.97/0 vs. 5.81/1.9

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:

The cell growth using test serum Lot: 48021122FBS was comparable to the internal standard serum. The viability of the cells before trypsination was similar. Using the test serum all cells displayed good viability and cell growth.

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