

Foetal Bovine Serum

Certificate of Analysis

Triple 0.1 µm sterile filtered
Manufactured in Germany

Lot No.: 29101019FBS
Origin: THE NETHERLANDS
Product Code(s): S-FBS-NL-015, S-FBS-NL-011
Date of Manufacture: 10/2019
Expiry Date: 10/2024
Storage: < - 15°C

Physical and Chemical Analysis

Test	Method	Specifications	Results
Identity	Internally Validated	Bovine	Bovine
Appearance	Visual	Clear yellow-amber	Clear yellow-amber
Specific Gravity	Mass Balance	> 1.01 g/ml	1.019 g/ml
pH	Electronic pH Meter	6.8 – 8.2	7.16
Osmolality	Osmometer	280 – 340 mOsm/kg	308 mOsm/kg
Endotoxin	LAL Kinetic	< 10 EU/ml	0.3 EU/ml
Free Hemoglobin	Colorimetric	< 25 mg/dl	3.44 mg/dl

Protein Profile

Test	Method	Specifications	Results
Total Protein	IDEXX Catalyst One	3.0 – 4.5 g/dl	3.9 g/dl
Albumin	IDEXX Catalyst One	1.4 – 3.4 g/dl	1.9 g/dl
Globulin	IDEXX Catalyst One	0.4 – 2.4 g/dl	2.0 g/dl
IgG	ELISA	< 400 µg/ml	87.50 µg/ml

Sterility Testing

Test	Method	Specifications	Results
Aerobic Bacteria	Internally Validated	Not detected	Not detected
Anaerobic Bacteria	Internally Validated	Not detected	Not detected
Fungi (Yeast & Mold)	Internally Validated	Not detected	Not detected
Mycoplasma	qPCR	Not detected	Not detected

Antibiotics Testing

Test	Method	Specifications	Results
Tetracycline	IDEXX Snap Test	Not detected	Not detected
Oxytetracycline	IDEXX Snap Test	Not detected	Not detected
Chlortetracycline	IDEXX Snap Test	Not detected	Not detected

Antibody Testing

Test	Method	Specifications	Results
BVDV-1	ELISA	Test and Report	Not detected
BVDV-2	ELISA	Test and Report	Not detected
BHV-1	ELISA	Test and Report	Not detected
PI-3	ELISA	Test and Report	Not detected

Virus Testing

Test	Method	Specifications	Results
Bovine Herpesvirus (BHV-1)	qPCR	Not detected	Not detected
Parainfluenza Virus 3 (PI-3)	qPCR	Not detected	Not detected
Bovine Viral Diarrhea Virus (BVDV)	Cell Culture (CPE)	Not detected	Not detected
Bovine Viral Diarrhea Virus (BVDV)	Cell Culture (non-CPE)	Not detected	Not detected

CAUTION: THIS PRODUCT IS NOT INTENDED FOR HUMAN OR ANIMAL CONSUMPTION OR THERAPEUTIC USE.

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Biochemistry

Test	Method	Specifications	Results
Aspartate Aminotransferase (AST)	IDEXX Catalyst One	Test and Report	59 U/L
Alanine Aminotransferase (ALT)	IDEXX Catalyst One	Test and Report	23 U/L
Lactate Dehydrogenase (LDH)	IDEXX Catalyst One	Test and Report	1917 U/L
Alkaline Phosphatase (ALKP)	IDEXX Catalyst One	Test and Report	161 U/L
Gamma-Glutamyl Transferase (GGT)	IDEXX Catalyst One	Test and Report	6 U/L
Cholesterol (CHOL)	IDEXX Catalyst One	Test and Report	0.78 mmol/L
Glucose (GLU)	IDEXX Catalyst One	Test and Report	5.74 mmol/L
Urea (BUN)	IDEXX Catalyst One	Test and Report	3.9 mmol/L
Creatinine (CREA)	IDEXX Catalyst One	Test and Report	154 µmol/L
Uric Acid (URIC)	IDEXX Catalyst One	Test and Report	194 µmol/L
Calcium (Ca)	IDEXX Catalyst One	Test and Report	3.02 mmol/L
Phosphorus (PHOS)	IDEXX Catalyst One	Test and Report	3.32 mmol/L
Total Bilirubin (TBIL)	IDEXX Catalyst One	Test and Report	5 µmol/L
Magnesium (Mg)	IDEXX Catalyst One	Test and Report	1.37 mmol/L
Sodium (Na)	IDEXX Catalyst One	Test and Report	131 mmol/L
Potassium (K)	IDEXX Catalyst One	Test and Report	> 10 mmol/L
Chloride (CL)	IDEXX Catalyst One	Test and Report	102 mmol/L
Triglyceride (Trig)	IDEXX Catalyst One	Test and Report	1.00 mmol/L

Cell-Culture Tests

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 [%]	6.35/1.1 vs.6.32/0.5
HELA	Cell Count	Cell count [log ₁₀ /ml]/dead cells [%]	6.25/3.0 vs.6.20/2.6

Scoring System (vs. Control Serum):

¹ 0 dead cells; 1 many cells degenerate and many dead cells; 2 cells partially degenerate and many dead cells; 3 few cells degenerate and few dead cells; 4 w/o pathological findings

² 0 single cells/cell aggregates; 1 < 50% confluency; 2 50 – 90% confluency; 3 confluency; 4 overly confluent

Interpretation of Cell Culture Results:

- The culture performance with the test serum and internal control serum showed a similar cell growth.
- All test cells using the test serum 29101019FBS showed good growth summary.

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