Certificate of Analysis

Ensuring Integrity in Every Cell Line

Product	RIN-m5F	**Passage Number**	6
Species	Rat	**Cell Count per mL**	2.0 million
Cytion™ Number	305359	**Volume per ampule**	1.5
Lot Number	305359-200726	**Freeze Date**	20.07.2026
Product Format	cryovial	**Freeze Medium**	Freeze medium containing FBS
Storage Conditions	Below -150°C	**Expiration Date**	Not applicable

At Cytion, we ensure the quality and reliability of our cell lines through in-house and third-party testing, including:

1. **STR Profiling:** To authenticate cell line[1] identity
2. **Virus Testing:** For species-specific[2] viruses where possible
3. **Mycoplasma Testing:** To prevent contamination.
4. **Interspecies Contamination Testing:** To ensure purity.
5. **Bacteria and Fungi Testing:** To ensure cells are free from microbial contaminants.

1: Human, Mouse, Rat, Hamster and Canine Species.
2: Human, Mouse, Rat, Hamster, Bovine, and Porcine Species.

Test Overview	Methodology	Acceptance Criteria	Outcome
Post-Freeze Viability	Viability assessment using Vi-CELL BLU by Beckman Coulter (analyzing 100 images per sample, 200 µl cell suspension per test)	≥70% post-thaw cell viability	93.6%
Recovery	Culture in the appropriate growth medium, microscopic evaluation	> 80% confluence within the expected recovery period	A T25 culture flask seeded at a density of 5.2 x 10^4 viable cells per cm^2 typically reaches approximately 100% confluence within 6 days.
Growth Properties	Observation of cell culture behaviour to determine if cells are adherent, suspension, or semi-adherent	Cells exhibit expected growth properties consistent with the cell line's characteristics	Adherent
Sterility Testing	Direct inoculation on 8 media, 10-day incubation; microbial ID by MALDI-TOF MS ± anaerobic culture	No aerobic microbial growth (anaerobic if test was performed)	Sterility confirmed
Mycoplasma Testing	PCR-based detection assay with specific primers targeting Mycoplasma DNA	No detectable Mycoplasma contamination confirmed by PCR	Pass

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	Species	Status
Interspecies Contamination Testing	Mouse	-
	Rat	+
	Human	-
	Chinese hamster	-
	African green monkey	-

	Marker	Alleles
Authentication	1	100
	13	121
	15	244, 246
	16	262, 264
	19	174
	2	128
	24	261, 263
	26	156, 158
	3	162
	30	193
	34	174
	35	203
	36	222
	4	250
	42	152
	55	205
	59	171
	61	110
	62	177
	67	165
	69	139, 141
	70	175
	73	203

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	Marker	Alleles
Authentication	75	140
	78	151
	79	182
	8	232
	81	130
	90	172, 176
	91	221
	96	212
	Identity match	unique profile

	Pathogen	Result
Species-Specific Pathogen Testing	LCMV	-
	Mycoplasma pulmonis	-
	KRV	-
	RMV	-
	RPV	-
	H1	-
	PVM	-
	rCMV	-
	RCV/SDAV	-
	Sendai	-

	Pathogen	Result
Post-production sterility and mycoplasma testing	Bacterial growth	-
	Fungal growth	-
	Mycoplasma sp.	-

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Third-Party Certified Quality Assurance

Since 2023, IDEXX has conducted STR profiling, species-specific pathogen testing, and species contamination analysis to ensure the authenticity, purity, and safety of our cell lines.

IDEXX BioAnalytics

The information provided is believed to be accurate, but both the information and product are offered without warranty for any applications beyond those specified. This certificate confirms that the material has been tested and is pure to the best of our knowledge.

This product is intended solely for laboratory research use and is not for use in humans, animals, or diagnostics. Proper Biosafety Level practices are required.

Cytion products may not be resold, modified for resale, or used commercially without prior written consent from Cytion.

Manufactured in Germany under our ISO 9001:2015 certified Quality Management System, ensuring high standards of quality and reliability.

Dr. Rosemarie Steubing

ID: 54B735CA-A692-4B23-AE47-2BF112B046BE
Reason: Approved <r.steubing@cytion.com>
September 1, 2026 at 10:15 AM CEST

Qualified personnel have validated the test results of this Certificate of Analysis and attested with their signature that the tests were conducted as reflected in the results presented here.

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