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CERTIFICATE OF ANALYSIS

AMV Reverse Transcriptase

Part Number: M101
Lot Number: XXXXX
Storage Temperature: -20°C

Source:	<i>avian myeloblastosis virus particles</i>
Size:	Bulk
Concentration:	10 U/ μ L
Storage Buffer:	200mM potassium phosphate (pH7.2), 0.2% Triton X-100, 2mM DTT and 50% glycerol
Reaction Buffer 5X:	250mM Tris-HCl (pH8.3 @ 25 ^o C), 250mM KCl, 50mM MgCl ₂ , 2.5mM spermidine and 50mM DTT.
Unit Definition:	One unit is the amount of enzyme required to catalyze the transfer of 1nmol of deoxynucleotide into acid-precipitable material in 10 minutes at 37 ^o C. Reaction conditions are: 50mM Tris-HCl (pH 8.3), 8.75mM MgCl ₂ , 40mM KCl, 10mM DTT, 0.1 mg/ml BSA, 1mM radiolabeled dTTP and 0.25mM poly(A):oligo(dT).
Quality Control:	<p><u>First-Strand cDNA Synthesis:</u> First strand cDNAs, of 1.2kb Control RNA is synthesized using 30 units of enzyme, 1 μg of each template, an oligo(dT) primer and a radiolabeled dNTP. The specification is the conversion of >12% of mRNA to cDNA. Full-length cDNA must be observed by gel electrophoresis and autoradiography.</p> <p><u>Endonuclease Activity:</u> 1 μg of Type I supercoiled plasmid DNA is incubated with 25 units of enzyme in 50mM Tris (pH8.3), 40mM KCl, 7mM MgCl₂, 10mM DTT for one hour at 37^oC. Following incubation, the supercoiled DNA is visualized on an ethidium bromide-stained agarose gel to verify the absence of visible nicking or cutting.</p> <p><u>Nuclease Activity:</u> 50ng of radiolabeled DNA or RNA is incubated with 25 units of enzyme in 4mM Tris (pH8.3), 3.2mM KCl, 0.56mM MgCl₂, 0.8mM DTT for one hour at 37^oC, and the release of radiolabeled nucleotides is monitored by scintillation counting of TCA-soluble material. Passing specifications is <1% release for DNase and <3% release for RNase.</p>
Physical Purity:	Purity is >80% in 2 bands (2 subunits) as judged by SDS-polyacrylamide gels with Coomassie blue staining.
Expiration:	Twelve months from shipment date
Storage and Handling:	-20°C

The performance of this product is guaranteed for twelve months from the date of purchase if stored and handled properly. Unless specified otherwise, all Alator Biosciences products are sold for research use only.