GenTegra RNAssure™

Immediate and Complete Protection Directly from RNA Extraction

RNAssure is a non-penetrating reagent based on patented Active Chemical Protection™ chemistry to preserve RNA integrity and stability against endogenous or environmental RNases as well as exposure to oxidation.

Key Features

Immediate Protection — Achieve maximum RNA protection by treating purified RNA samples with RNAssure as soon as they are isolated

No More −80 °C Storage — RNA is protected even at room temperature (RT), eliminating the concern that RNA may degrade during everyday experimental protocols or due to catastrophic freezer failure

Easy to Use — RNAssure integrates seamlessly with extraction kits from all major manufacturers

Preserve Functionality — RNAssure protected RNA remains biologically active and ready to use directly in downstream applications without further purification

RNAseq Concordance

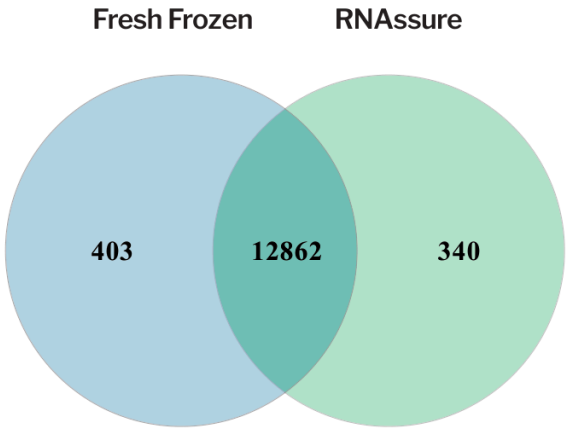
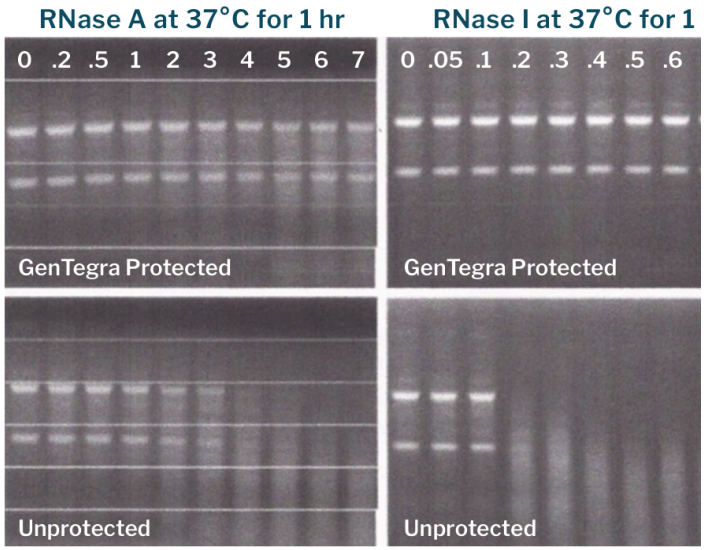


Figure 1: Co-expression Venn diagram — fresh frozen brain controls vs. RNAssure samples. 12,862 shared genes; no interference above natural variation in RNAseq results.

RNase Protection — Gel Electrophoresis



Storage & Protection

Storage Condition	Length of Protection
Room temperature (15–25 °C)	3 days
Refrigeration (2–8 °C)	2 weeks
Frozen (< −70 °C)	> 1 year

Workflow Integration

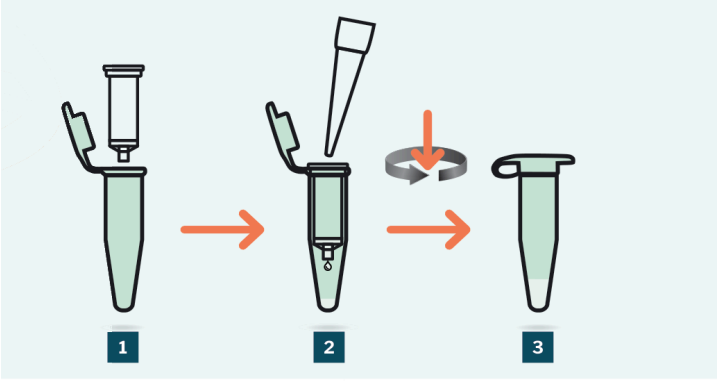


Figure 2: RNAssure Elution Tube replaces the manufacturer's elution collection tube. 1) Place spin column into RNAssure tube. 2) Add elution buffer, centrifuge, discard column. 3) RNA is now protected for at least 3 days at RT.

Figure 3: HeLa cell RNA (5 µg) incubated with increasing amounts of RNase A (left) and RNase I (right) at 37 °C for 1 hour. Top row: GenTegra protected — RNA integrity maintained. Bottom row: Unprotected — progressive degradation.

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Long-Term RT Stability — Bioanalyzer Analysis

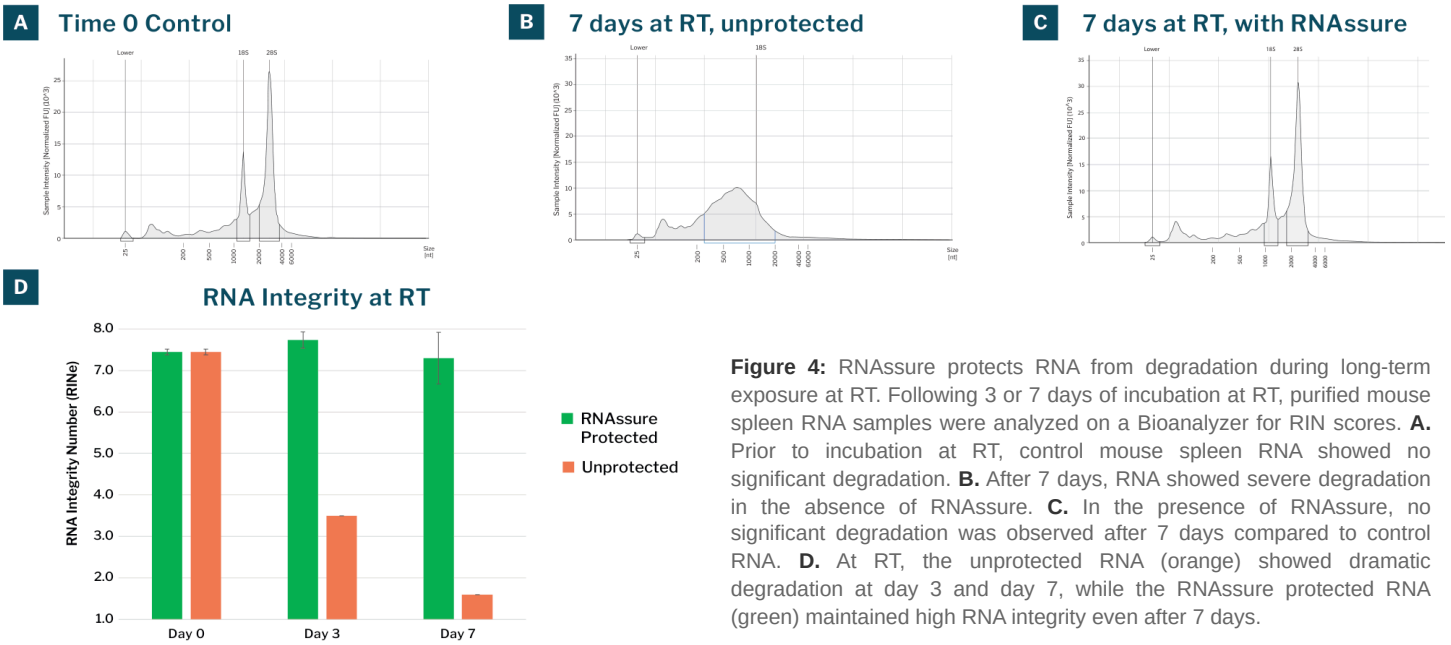

Figure 4: RNAssure protects RNA from degradation during long-term exposure at RT. Following 3 or 7 days of incubation at RT, purified mouse spleen RNA samples were analyzed on a Bioanalyzer for RIN scores. **A.** Prior to incubation at RT, control mouse spleen RNA showed no significant degradation. **B.** After 7 days, RNA showed severe degradation in the absence of RNAssure. **C.** In the presence of RNAssure, no significant degradation was observed after 7 days compared to control RNA. **D.** At RT, the unprotected RNA (orange) showed dramatic degradation at day 3 and day 7, while the RNAssure protected RNA (green) maintained high RNA integrity even after 7 days.

RNA Integrity — Short-Term RT Exposure

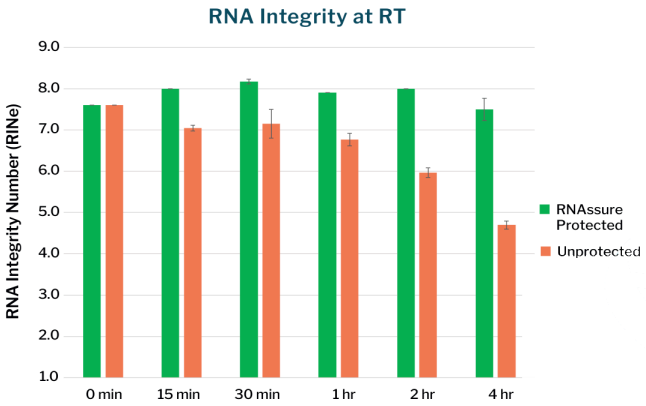

Figure 5. Following short incubation at RT, purified mouse spleen RNA samples (commercially sourced) were analyzed on a Bioanalyzer for RIN scores. In the absence of RNAssure (orange), the RNA sample exhibited progressive degradation, starting from 15 min exposure to RT. Whereas in the presence of RNAssure (green), the RNA sample was protected with no significant change in RINe value, throughout the 4 hr exposure to RT.

RNA Protection During DNase Treatment

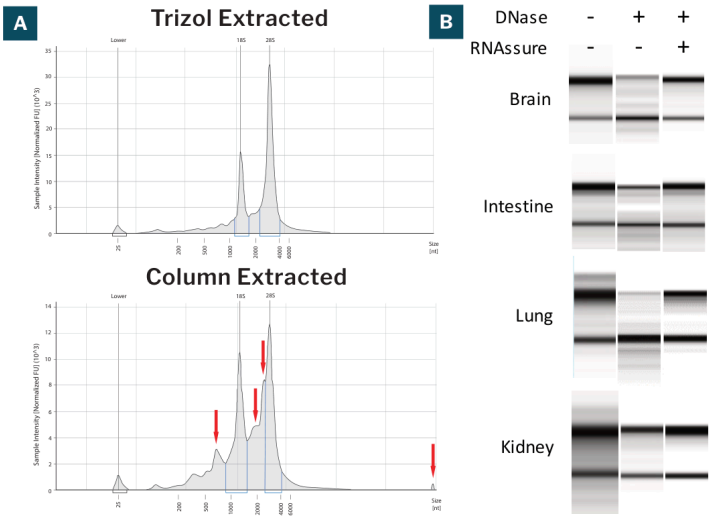

Figure 6: RNAssure protects RNA during DNase Treatment. RNA was extracted from various mouse organs using either Trizol-based method or a leading commercial column-based kit **A.** While mouse liver RNA extracted by Trizol was free of gDNA contamination, column-based kit led to significant contamination of gDNA of various sizes (red arrows). **B.** RNA extracted from brain, intestine, lung, and kidney, using column-based method, was subjected to in-solution DNase treatment following manufacturer's instruction (37°C for 30 min). After treatment, RNA from different samples showed moderate to severe degradation, evidenced by decreased 18S rRNA (top band) vs 28S rRNA (bottom band). In contrast, RNAssure helped significantly to maintain the RNA integrity during DNase digestion.

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