

Stability of OZ Biosciences RNAs

RNA stability under different storage, freezing thawing conditions.

RNA can suffer degradation when not handled, stored, or use properly. In order to assess how stable are OZ Biosciences mRNA, we have tested a randomly chosen RNA from our catalog; Tomato RNA, and submitted it to several freeze/thaw cycles as well as a mid-term storage at room temperature (RT).

Freeze (-80°C)/ Thaw (RT) cycles test have showed that up to 15 repetitions, RNAs did not show any sign of degradation in an agarose gel (Fig 1). Further transfection of tomato RNAs into HEK cells allowed us to verify the expression of the relative length protein. Tomato expression was observed under fluorescent microscope and showed a similar protein expression in all conditions (Fig2).

Fig1. Stability of Tomato RNA over 15 Freeze (-80°C)/thaw (RT) cycles. 1µg of RNA were loaded into an 1,5% agarose gel.

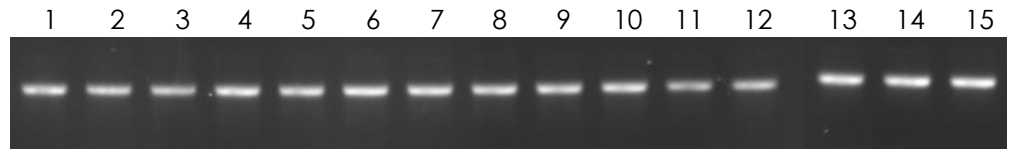
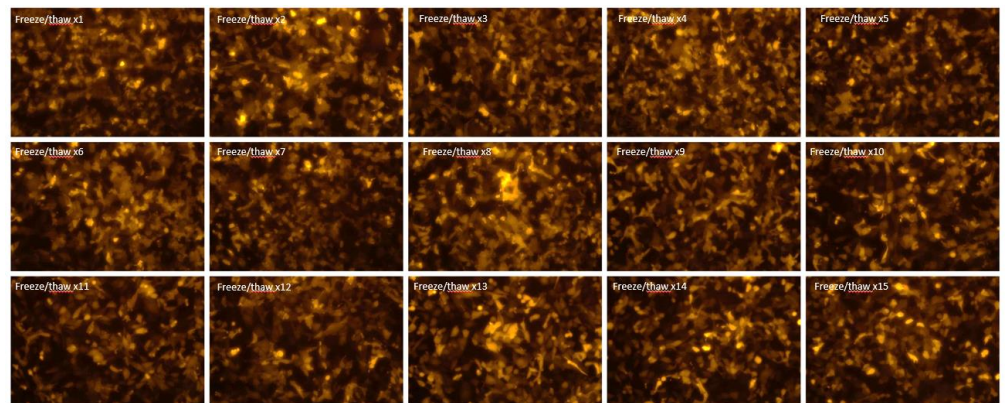


Fig2. Tomato expression at 24h after transfection of Tomato RNAs after various free/thaw repetitions in HEK cells using 100 ng of RNA per well in a 96-well plate and RmesFect™ transfection reagent. Photos x20.



In a similar manner, Tomato RNA were let on the bench at room temperature for several days. Agarose gel (Fig3) and microscope analysis (Fig4) showed a stability of mRNA over a period of 15 days.

Fig3. Stability of Tomato RNA at room temperature over 15 days.

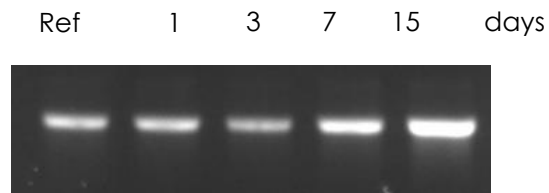
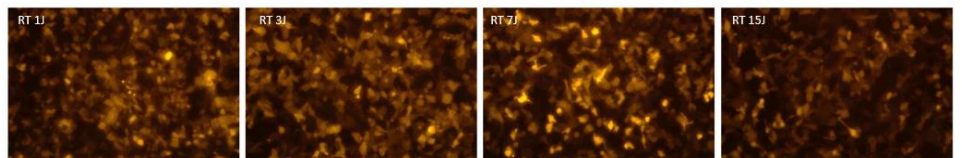


Fig4. Tomato expression at 24h after transfection of Tomato RNAs that were kept at RT for 1-15 days in HEK cells using 100 ng of RNA per well in a 96-well plate and RmesFect™ transfection reagent. Photos x20.



Conclusion

While we show that OZB RNAs are rather stable in non favorable conditions, which offer some margin of use in case of delayed delivery or mistake in the lab, we highly suggest to follow these recommandations:

Long term storage (months): -80°C.

Short term storage (few days): -20°

Freeze/thaw cycles: as less as possible.

Good Luck with your experiments!

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