

General Handling Protocol for Aptamer

1. Aptamers are provided in a dried form.
2. Always briefly spin down for the first time after delivery to avoid loss of the aptamer pellet.
3. Dissolve the stock aptamers completely to the desired stock concentration with buffers or dH₂O, by shaking over 30 minutes.
4. Aliquot and store stock aptamers at -20°C until you use it.
5. For the dilution of aptamer, please use proper buffer upon your experimental condition
 - Aptamers can be dissolved in most buffer solutions, for example PBS, HEPES, Tris etc. (detailed buffer composition see below)
 - Aptamers are stable at neutral pH range (7.0-8.0)
6. Perform Heating and cooling step for the proper folding of aptamer structure in buffer (Heating at 95°C 5 min → Slow cooling to RT)
 - Please heat aptamers in proper buffer solution at 95°C for 5 min, and then leave the tubes on the bench for 15 min.
 - Before heating and cooling process, please note that addition of 2⁺ ion such as magnesium in buffer is critical for maintaining proper structure of aptamer. If you want to add EDTA in the presence of MgCl₂, please note that higher concentration of EDTA may induce misfolding of aptamer structure and the aptamer would lose its activity

Notes:

- ➔ HEPES (pH 7.5): 40mM HEPES, 100mM NaCl, 5mM MgCl₂
- PBS (pH 7.4): 137mM NaCl, 2.7mM KCl, 8.1 mM Na₂HPO₄, 1.76mMKH₂PO₄
- Tris-HCl (pH 7.5): 50mM Tris, 150mM NaCl, 5mM MgCl₂, 1mM EDTA
- TE (pH 8.0): 10mM Tris, 1mM EDTA