INSTRUCTION SHEET

Immobilization of GATTA-AFM Nanorulers

Immobilization strategy using mica sheets and imaging under liquid conditions

i) Use a freshly cleaved mica sheet (for instance, a 12 mm mica disc* glued to a metal puck) and incubate it with 20 µl of folding buffer (1x FB: 1x TAE supplemented with 10 mM $MgCl_2$) for 1 minute. The mica sheet must be clean and flat without defects or cracks. Dispense the buffer homogeneously to the whole mica surface.

ii) Add about 10-50 fmol of GATTA-AFM sample (for instance, this equals to 1-5 µl volume for a 10 nM sample concentration) to the buffer on the mica. Tilt the mica sheet carefully in all directions to distribute the sample all over the surface and let it incubate for another 2 minutes.

iii) Your GATTA-AFM sample is ready to use. More buffer (1x FB) can be added if required by your imaging system. Magnesium ions might be replaced by other strong bivalent ions (monovalent ions like sodium should be avoided). Please be aware that changing the ions might require special safety measures and can influence shape and stability of the DNA nanostructure.

*Other dimensions and shapes for mica sheets can also be used. Please adjust the used volumes and amounts accordingly.

Imaging under dry conditions

iv) Prepare two watch glasses or flat bowls, one with 70/30% ethanol/water, the other one with pure ethanol.

v) Prepare your sample according steps i)-iii).

vi) Take a tweezer and dip your mica sheet from step iii) briefly into the ethanol/water bath. Directly afterwards transfer it to the ethanol bath and keep it there for a few seconds.

vii) Take the mica sheet out of the ethanol bath and let it dry (air dry or under gentle N_2 stream). If the sheet is dry it is ready to use.

DO YOU NEED ASSISTANCE?

CONTACT

T +49 89 2153 720 80
F +49 9192 243 99 89

info@gattaquant.com