

How should I prepare, store, and ship samples?

While purified DNA is stable, conditions during shipping may not be. Bionano Genomics recommends shipping cells or nuclei in plug form after treatment using the QIAGEN Puregene Proteinase K kit (QIAGEN Cat #158920). Ensure that a uniform suspension of cells (cell wall-free) or nuclei in each plug contains approximately 3-6 µg of DNA and that the low-melting agarose concentration is 0.75% for gel plug solidification.

To prepare the agarose sample plugs, you will need specific protocols to isolate nuclei or cell wall-free cells depending on the sample types (See BioNano [User Forum](https://forums.bionanogenomics.com/) <https://forums.bionanogenomics.com/>).

In addition to that, you will need:

1. The Bio-Rad CHEF Mammalian Genomic DNA Plug Kit (Cat #170-3591):
 - Low-melting agarose
 - Plug molds
 - Wash Buffer
 - Cell Suspension Buffer
2. QIAGEN Puregene Proteinase K (QIAGEN Cat #158920)
3. IrysPrep Lysis Buffer (Bionano PN 20255)

To store agarose plugs, keep them in 1X Wash Buffer (**10 mM Tris pH 8.0 and 50 mM EDTA**) for up to four months at 4°C.

To ship agarose plugs, put the plugs in a 1.5 ml microcentrifuge tube, fill the remaining portion of the tube with a 1X Wash Buffer, seal with PARAFILM® or equivalent, and ship at room temperature within 4 days. If the shipping will take more than 4 days, pack with a cold pack at 4°C. Do not allow sample to freeze.