## **1.4. PacBio Marine Animals/Invertebrates**

**Amount:** 200+ mg.

**Type:** Assembling PacBio libraries for marine animals (including fish, oysters, scallops and shrimp) is often more difficult than for other animals. Their tissues may contain high concentrations of several metabolic compounds and enzymes, *e.g.*, mucopolysaccharides and alkaline phosphatases, which interfere with the PacBio library procedure. If such difficulties are expected, please communicate them to your project manager.

Recommended tissue sources in the preferred order are:

1. Newly hatched larvae
2. Sperm
3. Blood
4. Muscle

**Preparation:** Flash freeze tissue in liquid nitrogen and store at -80°C prior to shipping.

**Shipping:**

* Ship frozen tissue overnight **with sufficient dry ice to ensure that sample remains frozen throughout shipment.**
* It is recommended to include 5-10 pounds of dry ice for each 24-hour period of the shipment. Please pack considering potential customs, or other ship delay.

**1.5. PacBio Purified DNA**

**Amount:** 20+ μg

**Preparation:** The highest possible molecular weight DNA should be extracted. DNA should be pure (no contamination from nucleases or RNA) and at a concentration of at least 100 ng/μl. DNA may be eluted in TE or the elution buffer that comes with the extraction kit and stored at 4°C prior to shipping.

* DNA concentration should only be measured using fluorescence-based methods. We recommend using the Qubit Broad Range DNA quantification method.
* It is critical that the DNA be high molecular weight (50+ kbp). The quality of DNA should be assessed by Pulsed Field Gel Electrophoresis. The mean fragment size must be at least 50 kbp, though higher molecular weight DNA is always preferred.

**Shipping:**

* Ship purified DNA overnight on wet ice.
* In-House Quality Assessment: For every DNA sample received, Dovetail Genomics will use 1 μl to measure the DNA concentration and 200 ng to run a Pulsed Field Gel to measure fragment size distribution.

We will contact you if the DNA received does not meet specifications.

**2.6. Omni-C Marine Animals/Invertebrates**

**Amount:** Minimum of 500 mg.

**Type:** Assembling Dovetail Omni-C libraries for marine invertebrates is often more difficult than for other animals. Their tissues may contain high concentrations of several metabolic compounds and enzymes, *e.g.*, mucopolysaccharides and alkaline phosphatases, which interfere with the library construction procedure. If such difficulties are expected, please communicate them to your project manager.

Recommended tissue sources in the preferred order are:

1. Internal organs (applicable for larger marine invertebrates)
2. Newly hatched larvae
3. Sperm
4. Blood
5. Muscle

**Note:** Mantle tissue does not perform well in the Dovetail Omni-C protocol. As such,

usage of mantle tissue is not recommended.

**Preparation:** Flash freeze tissue in liquid nitrogen and store at -80°C prior to shipping.

**Shipping:**

* Ship frozen tissue overnight in an insulated container **with sufficient dry ice to ensure the sample remains frozen throughout shipment.**
* It is recommended to include 5-10 pounds of dry ice for each 24-hour period of the shipment. Please pack considering potential customs or other ship delays.