

P/A *De novo* Genome Assembly

Reminder:

- Kindly note that all samples will not be returned. Please ensure you have made sufficient backups of the samples in advance.
- We recommend using 2 mL tubes for sample delivery (15 mL tubes for large tissue). 50 mL tubes are not accepted.

Recommendations on tissue samples

Species	Tissue	Survey	PacBio	Hi-C
Animal	Visceral tissue	0.5~1 g	≥ 3.5 g	≥ 2.0 g
	Muscle tissue		≥ 5.0 g	
	Mammalian blood	1.5 mL	≥ 5.0 mL	≥ 2 mL
	Poultry/Fish blood		≥ 0.5 mL	
Plant	Fresh Leaf	1~2 g	≥ 5.0 g	≥ 3.0 g
Cells	Cultured cell	≥ 1 × 10 ⁷	≥ 1 × 10 ⁸	≥ 1 × 10 ⁷
Insect	Soft tissue/Individual	0.5~1 g	≥ 3.0 g	≥ 2.0 g

Transcriptome sample for gene prediction	Tissue	NGS-transcriptome	TGS-transcriptome
Common plant	Root/Stem/Petal	450 mg	600 mg
	Leaf/Seed	300 mg	300 mg
	Fruit	1.2 g	1.2 g
Common animal	Heart/Intestine	300 mg	300 mg
	Viscera/Brain	240 mg	240 mg
	Muscle	450 mg	450 mg
	Bones/Hair/Skin	1 g	1 g
Arthropod	Insect	6	6
	Crustacea	300 mg	300 mg
Whole blood	blood	1 tube	1 tube

Note:

Transcriptome samples used for gene prediction should preferably be mixed samples of multiple tissues to obtain more transcripts.



Nucleotides sample requirements (Volume ≥ 15 µL)

Species	Concentration and Purity					Integrity
	Qubit Conc.(ng/µl)	Amount(µg)	OD260/280	OD260/230	Nanodrop/Qubit	
PB CCS DNA	≥ 50	10 µg /cell/sample	1.7-2.2	1.8-2.5	0.8-2.5	Agarose Gel: No or limited degradation. No or limited contamination.
PB RNA	≥ 100	≥ 0.75	1.7-2.5	0.5-2.5	-	RIN ≥ 8.0 5' ≥ 28S/18S ≥ 1
ONT RNA	≥ 100	≥ 0.75	1.7-2.5	0.5-2.5	-	RIN ≥ 7.5 5' ≥ 28S/18S ≥ 1
Illumina RNA	≥ 20	≥ 0.3	1.7-2.5	0.5-2.5	-	RIN ≥ 6 5' ≥ 28S/18S ≥ 1

Note:

1. It is recommended that samples used for different sequencing steps in genome assembly are obtained from the same individual to ensure genetic consistency.
2. The quality of gDNA used for PacBio sequencing is highly important. Please extract high-quality HMW DNA.

P/A Population Genetics

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Recommendations on tissue samples

Species	Tissue	WGS-NGS	WGS-ONT	WGS-PacBio	SLAF	WGBS
Animal	Visceral tissue	0.5~1 g	≥ 0.35 g	≥ 3.5 g	0.5 g	1~2 g
	Muscle tissue		≥ 0.5 g	≥ 5.0 g		
	Mammalian blood	1.5 mL	≥ 0.5 mL	≥ 5.0 mL	1.5 mL	2 mL
	Poultry/Fish blood		≥ 0.1 mL	≥ 0.5 mL		
Plant	Fresh Leaf	1~2 g	≥ 2 g	≥ 5.0 g	0.5~1 g	1~2 g
Cells	Cultured cell	≥ 5 × 10 ⁶	≥ 1 × 10 ⁷	≥ 1 × 10 ⁸	≥ 5 × 10 ⁶	≥ 5 × 10 ⁶
Insect	Soft tissue/Individual	0.5~1 g	≥ 1 g	≥ 3 g	≥ 0.5 g	1~2 g

Nucleotides sample requirements (Volume ≥ 15 µL)

Type	Concentration and Purity					Agarose Gel
	Conc.(ng/µl)	Amount	OD260/280	OD260/230	Nanodrop/Qubit	
SLAF	≥ 5	≥ 80 ng	1.6-2.5	-	-	No or limited contamination. No or with degradation (The main band is clear).
WGS NGS	≥ 1	≥ 30 ng	-	-	-	
WGS NGS PCR-FREE	≥ 40	≥ 500 ng	-	-	-	
WGS ONT	≥ 40	≥ 4 µg	1.7-2.2	≥ 1.5	0.8-2.5	
WGS PB	≥ 50	≥ 10 µg	1.7-2.2	0.8-2.5	0.8-2.5	
WGBS	≥ 5	≥ 400 ng	-	-	-	
RRBS	≥ 30	≥ 1 µg	-	-	-	
ChIP enriched DNA fragments	≥ 1	≥ 10 ng	Main peak at 100-750 bp			
Cut&Tag; Cut&Run harvested DNA fragments	-	≥ 5 ng	Please clarify the samples delivered is DNA fragments or DNA library.			
PCR Products NGS	≥ 40	≥ 1 µg	The target band should be clearly visible; fragments less than 500 bp.			

Human Genetics

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Recommendations on tissue samples

Species	Tissue	WGS-NGS	WGS-ONT	WGS-PacBio	WES
Human	Visceral tissue	0.5~1 g	≥ 0.35 g	≥ 3.5 g	0.5g
	Muscle tissue		≥ 0.5 g	≥ 5.0 g	
	Whole blood	≥ 1.5 mL	≥ 0.5 mL	≥ 5.0 mL	≥ 1.0 mL
	Cultured cell	≥ 5 × 10 ⁶	≥ 1 × 10 ⁷	≥ 1 × 10 ⁸	≥ 5 × 10 ⁶

Nucleotides sample requirements

Type	Concentration and Purity					Agarose Gel
	Conc.(ng/μl)	Amount	OD260/280	OD260/230	Nanodrop/Qubit	
WES	≥ 6	≥ 50 ng	1.8-2.0	-	-	No or limited contamination. No or with degradation (The main band is clear).
WGS NGS	≥ 1	≥ 30 ng	-	-	-	
WGS NGS PCR-FREE	≥ 40	≥ 500 ng	-	-	-	
WGS ONT	≥ 40	≥ 4 μg	1.7-2.2	≥ 1.5	0.8-2.5	
WGS PB	≥ 50	≥ 10 μg	1.7-2.2	0.8-2.5	0.8-2.5	
WGBS	≥ 5	≥ 400 ng	-	-	-	
RRBS	≥ 30	≥ 1 μg	-	-	-	
PCR Products (Specific band) NGS	≥ 40	≥ 1 μg	The target band should be clearly visible fragments less than 500bp (NGS)			