COFACTOR genomics

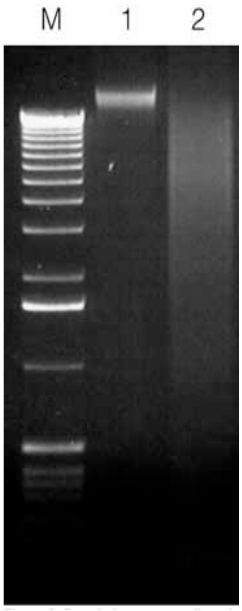
DNA Extraction and Quality Assessment guidelines:

1. DNA extraction is very organism specific. We recommend the Qiagen DNA extraction kit for DNA extraction however please follow your own lab protocol if you have obtained high quality DNA with it previously.

2. DNA samples must be treated with RNase and must be free of organics, proteins and polysaccharides. Resuspend final DNA samples in TE or EB buffer.

3. Genomic DNA quality can be assessed by running approximately 50 ng of the sample on a 1% agarose gel. Intact genomic DNA should appear as a high molecular weight (>10,000 bp) band with no lower molecular weight smear. A small amount of low molecular weight smear may be acceptable, however, this should be limited especially if the sample is being submitted for construction of long insert mate pair (LIMP) libraries. A significant amount of visible low molecular smearing may be detrimental to library generation. Low molecular smearing may also be indicative of the presence of RNA. *All DNA samples should be treated with RNase prior to submission for sequencing.*

Example of a high and low quality genomic DNA sample run on a 1% agarose gel.



Lane	Sample
M	1 kb ladder (Invitrogen)
1	High quality DNA sample
2	Low quality DNA

3. Measure DNA concentration with a fluorescence based measurement such as a Qubit or picogreen assay. These measurements tend to be specific for double stranded DNA and are preferable to nanodrop or other UV based measurements. If your lab does not have a way of making a fluorescent based measurement, please

measure with whatever method is available and indicate this information when submitting your sample. For nanodrop measurements:

UV absorption: 1.7< 260/280 <1.9 and 260/230 >2.0
Concentration: 50-500ng/uL

DNA requirements for different library types:

The following are minimum DNA requirements for library construction. You are always encouraged to submit more than the recommended amount.

Sequencing Platform	Library type	Minimum DNA amount
Illumina/ABI Solid	SIPE	5 ug
Illumina/ABI Solid	LIMP-1.5kb-3kb	10 ug
Illumina/ABI Solid	LIMP-5kb	20 ug
Illumina/ABI Solid	Amplicon	3 ug
454 Junior	Rapid library	2 ug
454 Junior	Amplicon	1 ug
454 Junior	Paired end 8kb, 20kb	20-30 ug
Ion Torrent PGM	gDNA library	5 ug
Ion Torrent PGM	Amplicon	1-2 ug

Please fill out the sample submission form and attach all QC data to your quote. Include this information in your shipping container when you submit your samples.

All DNA samples must be dissolved in EB or TE buffer and shipped either on cold packs overnight or frozen with dry ice to the following address:

Cofactor Genomics
Attn: Sample Submission
3141 Olive Street
St Louis, MO 63103

Packages are accepted Monday through Friday between the hours of 8am-5pm (except holidays).