



Plan for Galaxy based Chip-exo Analysis platform

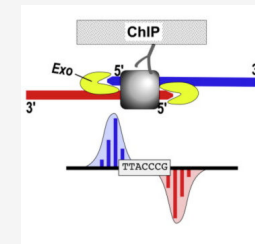
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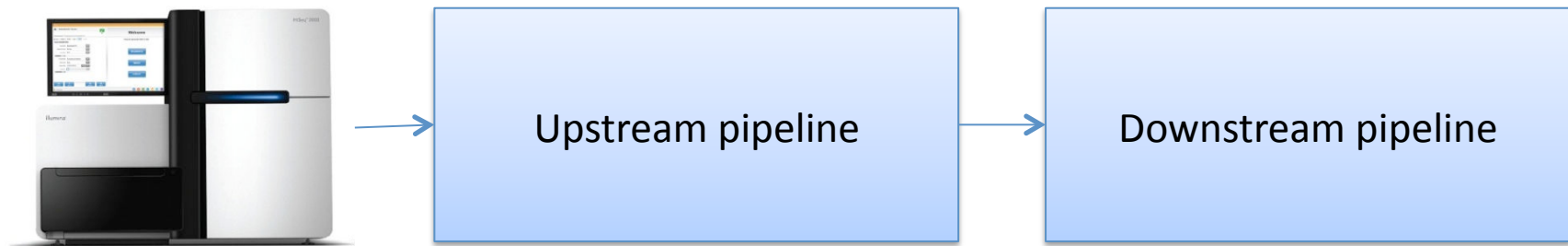
Chip-exo Analysis

- o The improved version of Chip-seq
- o Exonuclease digestion after sonication
- o Tested on multiple platforms : SOLiD, IlluminGA, IlluminaHiSeq, IlluminaNextSeq
- o MACS, multiGPS, GeneTrack, CexoR, dPeak
- o Epigenomics for model organisms(yeast, fly, mouse), and human cells



Bioinformatics pipeline for Chip-exo

Sequencing data can be distributed in several steps, but it can be summarized as upstream & downstream steps.



HiSeq-2000

Data distribution
Do it your self

Data distribution
With more support



Large dataset collections

- o 100-200 Chip-exo samples for yeast transcription factors binding and histone modification assay
- o 10-50 Chip-exo samples for human TFs
- o 3 biological replicates, multiple conditions
- o The bioinformatics pipeline (shell scripts)
- o Sample specimen database (5,000 samples)

Sample List - Pugh Lab

+ Add New Sample

20 items

per page

ID	Sample Descriptions	Reference Genome	Files
4750	RNA_Oligo-dT_U2OS_-_DMEM_UV-00J-0h_RS311_yuw12-S003_Pugh40812	hg19	
4749	RNA_Oligo-dT_U2OS_-_DMEM_UV-50J-6h_RS311_yuw12-S003_Pugh40811	hg19	
4748	RNA_Oligo-dT_U2OS_-_DMEM_UV-50J-6h_RS211_yuw12-S003_Pugh40806	hg19	
4747	RNA_Oligo-dT_U2OS_-_DMEM_UV-00J-0h_RS211_yuw12-S003_Pugh40805	hg19	
4746	No-Ab_-_InVitro_-_XO133_mjr26-130522_Pugh40735	sacCer3	
4745	Chd1_TAP_InVitro_-_YPD_Chd1-5nM_XO333_mjr26-130522_Pugh40734	sacCer3	
4744	Isw2_TAP_InVitro_-_YPD_Isw2-5nM_XO333_mjr26-130522_Pugh40733	sacCer3	
4743	Isw1_TAP_InVitro_-_YPD_Isw1-5nM_XO333_mjr26-130522_Pugh40732	sacCer3	
4742	Rsc2_TAP_InVitro_-_YPD_Rsc2-5nM_XO333_mjr26-130522_Pugh40731	sacCer3	
4741	Tup1_TAP_InVitro_-_YPD_Tup1-5nM_XO333_mjr26-130522_Pugh40730	sacCer3	
4740	Reb1_TAP_InVitro_-_YPD_Reb1-5nM_XO533_mjr26-130522_Pugh40729	sacCer3	
4739	Rap1_TAP_InVitro_-_YPD_Rap1-5nM_XO433_mjr26-130522_Pugh40728	sacCer3	
4738	Abf1_TAP_InVitro_-_YPD_Abf1-5nM_XO433_mjr26-130522_Pugh40727	sacCer3	
4737	No-Ab_-_InVitro_-_XO122_mjr26-130522_Pugh40726	sacCer3	
4736	Chd1_TAP_InVitro_-_YPD_Chd1-5nM_XO222_mjr26-130522_Pugh40725	sacCer3	
4735	Isw2_TAP_InVitro_-_YPD_Isw2-5nM_XO222_mjr26-130522_Pugh40724	sacCer3	
4734	Isw1_TAP_InVitro_-_YPD_Isw1-5nM_XO222_mjr26-130522_Pugh40723	sacCer3	
4733	Rsc2_TAP_InVitro_-_YPD_Rsc2-5nM_XO222_mjr26-130522_Pugh40722	sacCer3	
4732	Tup1_TAP_InVitro_-_YPD_Tup1-5nM_XO222_mjr26-130522_Pugh40721	sacCer3	
4731	Reb1_TAP_InVitro_-_YPD_Reb1-5nM_XO422_mjr26-130522_Pugh40720	sacCer3	

Search by

Sample name

Search

View All

Page

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of 238

There are 4750 samples in total.



Web-based sample database
to shell script submission

Galaxy based platform to communicate collaborators

The screenshot displays the Galaxy web interface for the Pugh Lab. The main content area shows a 'Sample List - Pugh Lab' table with 15 items per page. The table columns include 'Import to Galaxy', 'Target', 'Antibody', 'Cell type | Strain', 'User', 'Assay | Replicate', 'Uniq ID', 'Primary Genome ID', 'Index Count', and 'Good quality?'. All items are currently in a 'Pending' state. The right-hand panel shows a 'History' section with a list of recent jobs, including 'Peak pairing diagram', 'Peak orphan', and 'Peak predictor on data 133'. The left-hand panel contains a 'Tools' sidebar with various categories like 'Get Data', 'Unix Tools', 'Motif Tools', and 'Peak Calling'. The top navigation bar includes 'Analyze Data', 'Workflow', 'Shared Data', 'Visualization', 'Help', and 'User' menus. The bottom of the page features a copyright notice: 'Copyright © 2013 IGenomics, Pugh Lab & Center for Eukaryotic Gene Regulation. All rights reserved.'

Import to Galaxy	Target	Antibody	Cell type Strain	User	Assay Replicate	Uniq ID	Primary Genome ID	Index Count	Good quality?
Import	H3	ab1791	BY4742	bfp2	MN	Pugh01101	sacCer3	3,248,467	Pending
Import	H3	ab1791	BY4742	bfp2	MN	Pugh01102	sacCer3	4,153,306	Pending
Import	H3	ab1791	PY014	bfp2	MN	Pugh01103	sacCer3	4,043,890	Pending
Import	H3	ab1791	PY014	bfp2	MN	Pugh01104	sacCer3	6,519,890	Pending
Import	H3	ab1791	PY014	bfp2	MN	Pugh01105	sacCer3	22,686,889	Pending
Import	H3	ab1791	PY014	bfp2	MN	Pugh01106	sacCer3	11,465,974	Pending
Import	H3	ab1791	BY4741	bfp2	MN	Pugh01107	sacCer3	7,602,479	Pending
Import	H3	ab1791	BY4741	bfp2	MN	Pugh01108	sacCer3	5,977,271	Pending
Import	H3	ab1791	BY4741	bfp2	MN	Pugh01109	sacCer3	5,708,100	Pending
Import	H3	ab1791	BY4741	bfp2	MN	Pugh01110	sacCer3	2,297,108	Pending
Import	H3	ab1791	BY4741	bfp2	MN	Pugh01111	sacCer3	6,450,969	Pending
Import	H3	ab1791	BY4741	bfp2	MN	Pugh01112	sacCer3	4,781,153	Pending
Import	CTCF	-	K562	bfp2	XO	Pugh01201	sacCer3	1,055	Pending
Import	Reb1	-	BY4741	bfp2	XO	Pugh01202	sacCer3	59	Pending
Import	no-Tag	-	BY4741	bfp2	XO	Pugh01203	sacCer3	606	Pending



Thanks to
Galaxy Team & Galaxy
Community