PSON0001 Genomic Characterization of Cell Lines

PSON0001 Genomic Characterization of Cell Lines This study provides genomic characterization of 39 cell lines from Physical Sciences Oncology Center (PS-OC) Network Bioresource Core Facility (PBCF) through the sequencing of mRNA (TruSeq Stranded RNA Sample Preparation Kit), miRNA (TruSeq Small Total RNA Sample Prep Kit) and exome (Agilent SureSelectXT2 Human All Exon V5 kit) and aligning to a reference genome (HG19/37). Software for the mRNA characterizations included: cufflinks, cuffdecoder, fastcqReports, mapsplice, tophat, transdecoder, for miRNA included: bowtie2, miRanalyzer, miTools. and for exome included bowtie2. Datasets include the output specific to these software packages, as well as more widely used bioinformatics formats: bam, bed, fasta, fastq, vcf (4.1).

Download the dataset at ftp://caftpd.nci.nih.gov/psondcc/CellLineGenomics/

The project entries at NCBI's BioProject database, with links to their entries at NCBI's Short Read Archive (SRA) and BioSample databases:

- miRNA sequencing BioProject PRJNA325939 http://www.ncbi.nlm.nih.gov/bioproject/325939
- mRNA sequencing BioProject PRJNA325938 http://www.ncbi.nlm.nih.gov/bioproject/325938
- Exome sequencing BioProject PRJNA325935 http://www.ncbi.nlm.nih.gov/bioproject/325935

The project entries at Synapse:

- Exome characterization https://www.synapse.org/#!Synapse:syn7248584
- mRNA characterization https://www.synapse.org/#!Synapse:syn7248583
- miRNA characterization https://www.synapse.org/#!Synapse:syn7248581

Table 1. 39 Cell lines used in PSON0001 Genomic Characterization of Cell Lines

Tissue	Cell line name	PBCF Catalog no.	ATCC collection	Cell type	Disease and stage	NCBI BioSample	NCBI SRA
BRAIN	T98G	NCI-PBCF-CRL1690	CRL-1690	FIBROBLAST	GLIOBLASTOMA MULTIFORME	SAMN05292443	SRS1547227
BRAIN	U-87 MG	NCI-PBCF-HTB14	HTB-14	EPITHELIAL	GLIOBLASTOMA; ASTROCYTOMA GRADE IV	SAMN05292456	SRS1547247
BREAST	DU4475	NCI-PBCF-HTB123	HTB-123	EPITHELIAL	CARCINOMA	SAMN05292453	SRS1547241
BREAST	HCC1937	NCI-PBCF-	CRL-2336	EPITHELIA	PRIMARY	SAMN0529	SRS15472

		CRL-2336		L	DUCTAL CARCINOMA TNM STAGE IIB GRADE 3	2445	66
BREAST	HTERT-HME1	NCI-PBCF-CRL4010	CRL-4010	EPITHELIAL-LIKE	NORMAL	SAMN05292449	SRS1547237
BREAST	MCF-7	NCI-PBCF-HTB22	HTB-22	EPITHELIAL	ADENOCARCINOMA	SAMN05292458	SRS1547249
BREAST	MCF10A-JSB	NCI-PBCF-1000	CRL-10317	EPITHELIAL	FIBROCYSTIC DISEASE	SAMN05292436	SRS1547218
BREAST	MCF7-B7-TS	NCI-PBCF-1001	HTB-22	EPITHELIAL	ADENOCARCINOMA	SAMN05292459	SRS1547217
BREAST	MDA-MB-231	NCI-PBCF-HTB26	HTB-26	EPITHELIAL	ADENOCARCINOMA	SAMN05292460	SRS1547251
BREAST	MDA-MB-468	NCI-PBCF-HTB132	HTB-132	EPITHELIAL	ADENOCARCINOMA	SAMN05292454	SRS1547243
BREAST	T-47D	NCI-PBCF-HTB133	HTB-133	EPITHELIAL	DUCTAL CARCINOMA	SAMN05292455	SRS1547245
BREAST	ZR-75-1	NCI-PBCF-CRL1500	CRL-1500	EPITHELIAL	DUCTAL CARCINOMA	SAMN05292440	SRS1547222
COLON	CACO-2	NCI-PBCF-HTB37	HTB-37	EPITHELIAL-LIKE	ADENOCARCINOMA	SAMN05292461	SRS1547253
COLON	HCT116	NCI-PBCF-CCL247	CCL-247	EPITHELIAL	CARCINOMA	SAMN05292433	SRS1547263
COLON	HT-29	NCI-PBCF-HTB38	HTB-38	EPITHELIAL	ADENOCARCINOMA	SAMN05292462	SRS1547254
COLON	LOVO	NCI-PBCF-CCL229	CCL-229	EPITHELIAL	ADENOCARCINOMA GRADE IV	SAMN05292432	SRS1547264
COLON	SW480	NCI-PBCF-CCL228	CCL-228	EPITHELIAL	ADENOCARCINOMA	SAMN05292431	SRS1547250
COLON	SW620	NCI-PBCF-CCL227	CCL-227	EPITHELIAL	ADENOCARCINOMA	SAMN05292430	SRS1547235
LUNG	NCI-BL2126	NCI-PBCF-CCL256.1	CCL-256	EPITHELIAL	ADENOCARCINOMA	SAMN05292435	SRS1547262
LUNG	NCI-H2087	NCI-PBCF-CRL5922	CRL-5922	EPITHELIAL-LIKE AND/OR ROUNDED	ADENOCARCINOMA STAGE 1	SAMN05292451	SRS1547239
LUNG	NCI-H2126	NCI-PBCF-CCL256	CCL-256	EPITHELIAL	ADENOCARCINOMA	SAMN05292434	SRS1547265
LUNG	NL20	NCI-PBCF-	CRL-2503	EPITHELIA	NORMAL	SAMN0529	SRS15472

		CRL2503		L		2446	30
OVARY	CAOV-3	NCI-PBCF-HTB75	HTB-75	EPITHELIAL	ADENOCARCINOMA	SAMN05292465	SRS1547258
OVARY	NIH: OVCAR-3	NCI-PBCF-HTB161	HTB-161	EPITHELIAL	ADENOCARCINOMA	SAMN05292457	SRS1547248
OVARY	SKOV-3	NCI-PBCF-HTB77	HTB-77	EPITHELIAL	ADENOCARCINOMA	SAMN05292466	SRS1547259
PANCREAS	CAPAN-1	NCI-PBCF-HTB79	HTB-79	EPITHELIAL	ADENOCARCINOMA	SAMN05292467	SRS1547260
PANCREAS	HTERT-HPNE	NCI-PBCF-CRL4023	CRL-4023	EPITHELIAL-LIKE	NORMAL	SAMN05292450	SRS1547238
PANCREAS	PANC-1	NCI-PBCF-CRL1469	CRL-1469	EPITHELIAL	EPITHELIOID CARCINOMA	SAMN05292439	SRS1547220
PERIPHERAL BLOOD	NCI-BL2087	NCI-PBCF-CRL5965	CRL-5965	LYMPHOBLAST	NORMAL	SAMN05292452	SRS1547240
PROSTATE	22RV1	NCI-PBCF-CRL2505	CRL-2505	EPITHELIAL	CARCINOMA	SAMN05292447	SRS1547231
PROSTATE	DU 145	NCI-PBCF-HTB81	HTB-81	EPITHELIAL	CARCINOMA	SAMN05292468	SRS1547261
PROSTATE	LNCAP CLONE FGC	NCI-PBCF-CRL1740	CRL-1740	EPITHELIAL	CARCINOMA	SAMN05292444	SRS1547228
PROSTATE	PC-3	NCI-PBCF-CRL1435	CRL-1435	EPITHELIAL	ADENOCARCINOMA GRADE IV	SAMN05292438	SRS1547219
PROSTATE	RWPE-1	NCI-PBCF-CRL11609	CRL-11609	EPITHELIAL	NORMAL	SAMN05292437	SRS1547267
PROSTATE	VCAP	NCI-PBCF-CRL2876	CRL-2876	EPITHELIAL	CANCER	SAMN05292448	SRS1547233
SKIN	A375	NCI-PBCF-CRL1619	CRL-1619	EPITHELIAL	MALIGNANT MELANOMA	SAMN05292441	SRS1547223
SKIN	MEWO	NCI-PBCF-HTB65	HTB-65	FIBROBLAST	MALIGNANT MELANOMA	SAMN05292463	SRS1547256
SKIN	SK-MEL-2	NCI-PBCF-HTB68	HTB-68	POLYGONAL	MALIGNANT MELANOMA	SAMN05292464	SRS1547257
SKIN	WM266-4	NCI-PBCF-CRL1676	CRL-1676	EPITHELIAL	MELANOMA	SAMN05292442	SRS1547225

Data usage policy

The data contained within the PS-ON DCC is based on several research projects and is intended to be rapidly and constantly updated for the research community to access and use.

The NCI requests that any data users:

- Inform the data submitters about the intention to submit a publication that uses PS-ON DCC data.
    - Include the following statement in any publications resulting from the use of PS-ON DCC data: *Data used in this publication were generated by projects sponsored by the NCI Physical Sciences in Oncology Initiative.*