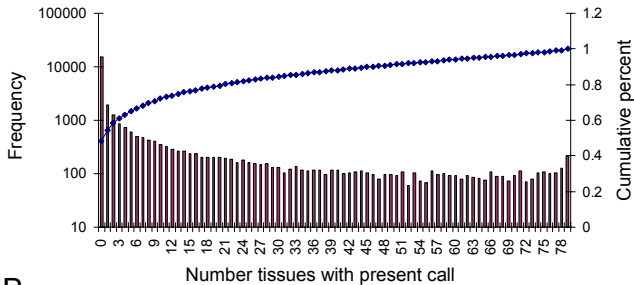
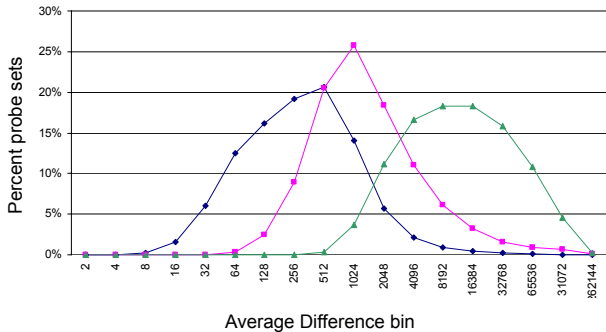


A**B**

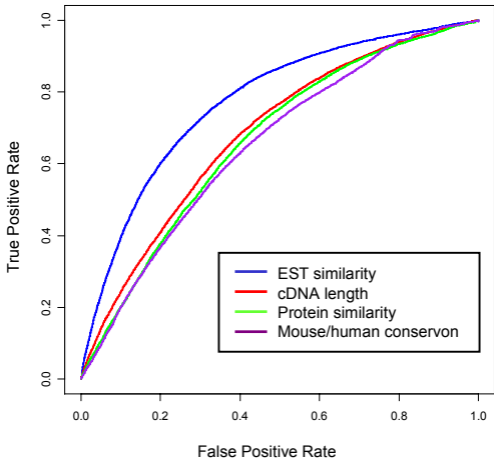


Table 1. Human sample annotation

Bought as tissue*						
Tissue	Atlas Sample Label	Vendor	Age	Sex	Ethnicity	Concomitant medications
Adipocyte	ADIPOCYTE	Zen-Bio	39	F		
Adrenal Cortex	AdrenalCortex	Clinomics	43	F	Cau	aspirin, Inderol
Adrenal Cortex	AdrenalCortex		50	M	Cau	aspirin, Inderol
Adrenal Cortex	AdrenalCortex		56	M	Cau	aspirin
Appendix	Appendix	Clinomics	60	M	Cau	NA
Appendix	Appendix		45	M	Cau	NA
Appendix	Appendix		58	F	Cau	NA
Appendix	Appendix		57	F	Cau	Tylenol
atrioventricular node	atrioventricularnode	Clinomics	22	M	Cau	None
atrioventricular node	atrioventricularnode		61	F	Cau	aspirin, Tylenol
bronchial epithelial cells	bronchialepithelialcells	†				
CardiacMyocytes	CardiacMyocytes	Clonetics Cat				
CerebellumPeduncles	CerebellumPeduncles	AMS Biotech.	41	M		
CerebellumPeduncles	CerebellumPeduncles		24	M		
ciliary ganglion	ciliaryganglion	Clinomics	43	M	Cau	Unk
ciliary ganglion	ciliaryganglion		50	M	Cau	aspirin, Tylenol
ciliary ganglion	ciliaryganglion		39	F	Cau	None
Cingulate Cortex	CingulateCortex	Clinomics	28	M	Cau	aspirin, Tylenol
Cingulate Cortex	CingulateCortex		22	F	Cau	aspirin, Tylenol
Cingulate Cortex	CingulateCortex		52	M	Cau	aspirin, Tylenol
Cingulate Cortex	CingulateCortex		54	F	Cau	aspirin
DorsalRootGanglion	DRG	Clinomics	52	M	Cau	aspirin
DorsalRootGanglion	DRG		61	F	Cau	aspirin
DorsalRootGanglion	DRG		58	F	Cau	aspirin
fetalThyroid	fetalThyroid	‡	fetal	fetal		
globus pallidus	globuspallidus	Clinomics	66	M	Cau	Unk
globus pallidus	globuspallidus		52	M	Cau	aspirin, Tylenol
globus pallidus	globuspallidus		51	F	Cau	aspirin
globus pallidus	globuspallidus		39	F	Cau	None
medulla oblongata	MedullaOblongata	Clinomics	58	M	Cau	None
medulla oblongata	MedullaOblongata		28	M	Cau	None
medulla oblongata	MedullaOblongata		43	F	Cau	None
OccipitalLobe	OccipitalLobe	AMS Biotech.	28	M		
OccipitalLobe	OccipitalLobe		23	M		
Olfactory Bulb	OlfactoryBulb	Clinomics	43	M	Cau	Unk
Olfactory Bulb	OlfactoryBulb		58	F	Cau	Unk
Olfactory Bulb	OlfactoryBulb		61	M	Cau	aspirin, Tylenol
Olfactory Bulb	OlfactoryBulb		66	F	Cau	aspirin
ovary	Ovary	Clinomics	57	F	Cau	aspirin, Tylenol
ovary	Ovary		53	F	Cau	aspirin, Tylenol
Pancreas, Beta cell islets	PancreaticIslets	Clinomics	52	F	Cau	aspirin
Pancreas, Beta cell islets	PancreaticIslets		41	F	Cau	aspirin, Tylenol
Pancreas, Beta cell islets	PancreaticIslets		61	M	Cau	aspirin, Tylenol
Pancreas, Beta cell islets	PancreaticIslets		28	M	Cau	aspirin, Tylenol
ParietalLobe	ParietalLobe	AMS Biotech.	22	M		
ParietalLobe	ParietalLobe		28	M		
Pituitary	Pituitary	Clinomics	25	M	Cau	NA
Pituitary	Pituitary		41	F	Cau	NA
pons	Pons	Clinomics	58	M	Cau	aspirin, Tylenol
pons	Pons		61	M	Cau	Unk
pons	Pons		66	F	Cau	aspirin, Tylenol
pons	Pons		52	F	Cau	aspirin, Tylenol
PrefrontalCortex	PrefrontalCortex	Mt. Sinai	96	F		
PrefrontalCortex	PrefrontalCortex		90	F		
PrefrontalCortex	PrefrontalCortex		74	F		
PrefrontalCortex	PrefrontalCortex		64	F		
salivary gland	salivarygland	Clinomics	21	M	Cau	aspirin, Inderol
salivary gland	salivarygland		55	M	Cau	aspirin, Inderol
salivary gland	salivarygland		29	F	Cau	aspirin
salivary gland	salivarygland		51	F	Cau	aspirin
Skeletal Muscule (psoas)	SkeletalMuscle	Clinomics	41	F	Cau	Tylenol
Skeletal Muscule (psoas)	SkeletalMuscle		58	F	Cau	Tylenol
Skeletal Muscule (psoas)	SkeletalMuscle		62	M	Cau	Tylenol
Skeletal Muscule (psoas)	SkeletalMuscle		60	M	Cau	NA
Skin	skin	Clinomics	47	F	Cau	NA
Skin	skin		50	F	Cau	NA
Skin	skin		56	M	Cau	Ativan
SmoothMuscle	SmoothMuscle	Clonetics	62	M	cau	none
subthalamic nucleus	subthalamicnucleus	Clinomics	44	M	Cau	Unk
subthalamic nucleus	subthalamicnucleus		43	M	Cau	Unk
subthalamic nucleus	subthalamicnucleus		58	F	Cau	aspirin
subthalamic nucleus	subthalamicnucleus		61	F	Cau	aspirin
superior cervical ganglion	SuperiorCervicalGanglion	Clinomics	58	M	Cau	aspirin, Tylenol
superior cervical ganglion	SuperiorCervicalGanglion		28	M	Cau	Unk
superior cervical ganglion	SuperiorCervicalGanglion		22	F	Cau	None
temporal lobe	TemporalLobe	Clinomics	51	M	Cau	None
temporal lobe	TemporalLobe		28	M	Cau	None
temporal lobe	TemporalLobe		44	F	Cau	None
temporal lobe	TemporalLobe		43	F	Cau	None

Testi - Germ Cell	TestisGermCell	Clinomics	51	M	Cau	aspirin
Testi - Germ Cell	TestisGermCell		52	M	Cau	aspirin
Testi - Germ Cell	TestisGermCell		50	M	Cau	aspirin
Testi - Interstitial	TestisInterstitial	Clinomics	54	M	Cau	aspirin
Testi - Interstitial	TestisInterstitial		69	M	Cau	Tylenol
Testi - Interstitial	TestisInterstitial		42	M	Cau	Vioxx
Testi - Interstitial	TestisInterstitial		44	M	Cau	NA
Testi - Leydig Cell	TestisLeydigCell	Clinomics	53	M	Cau	NA
Testi - Leydig Cell	TestisLeydigCell		78	M	Cau	Ativan
Testi - Leydig Cell	TestisLeydigCell		43	M	Cau	xanax
Testi - Leydig Cell	TestisLeydigCell		49	M	Cau	Tylenol
Testi - Seminiferous Tubule	TestisSeminiferousTubule	Clinomics	43	M	Cau	Elavil
Testi - Seminiferous Tubule	TestisSeminiferousTubule		70	M	Cau	aspirin
Testi - Seminiferous Tubule	TestisSeminiferousTubule		56	M	Cau	aspirin
Testi - Seminiferous Tubule	TestisSeminiferousTubule		43	M	Cau	NA
Tongue	TONGUE	Clinomics	44	F	Cau	aspirin
Tongue	TONGUE		33	F	Cau	aspirin, Tylenol
Tongue	TONGUE		59	M	Cau	aspirin
Tonsil	Tonsil	Clinomics	52	M	Cau	NA
Tonsil	Tonsil		54	M	Cau	NA
Tonsil	Tonsil		33	F	Cau	aspirin
Tonsil	Tonsil		44	F	Cau	aspirin
trigeminal ganglion	TrigeminalGanglion	Clinomics	61	M	Cau	aspirin, Tylenol
trigeminal ganglion	TrigeminalGanglion		35	F	Cau	None
Uterus Corpus	UterusCorpus	Clinomics	21	F	Cau	NA
Uterus Corpus	UterusCorpus		50	F	Cau	NA
Whole Blood	WHOLEBLOOD	UCSD	56	M		
Whole Blood	WHOLEBLOOD		73	M		
Whole Blood	WHOLEBLOOD		48	F		
CD105+ Endothelial	BM-CD105+Endothelial	AllCells	21	M	Asian	
CD105+ Endothelial	BM-CD105+Endothelial		19	F	Caucasian	
CD33+ Myeloid	BM-CD33+Myeloid	AllCells	19	F	Caucasian	
CD33+ Myeloid	BM-CD33+Myeloid		21	M	Asian	
CD34+	BM-CD34+	AllCells	33	M	Caucasian	
CD34+	BM-CD34+		19	M	Asian	
CD71+ Early Erythroid	BM-CD71+EarlyErythroid	AllCells	29	F	Caucasian	
CD71+ Early Erythroid	BM-CD71+EarlyErythroid		25	M	Caucasian	
BDCA4+ Dendritic Cells	PB-BDCA4+Dendritic_Cells	AllCells	23	F	Caucasian	
BDCA4+ Dendritic Cells	PB-BDCA4+Dendritic_Cells		36	M	Caucasian	
CD14+ Monocytes	PB-CD14+Monocytes	AllCells	32	M	Caucasian	
CD14+ Monocytes	PB-CD14+Monocytes		24	M	Caucasian	
CD19+ B Cells (neg. sel.)	PB-CD19+Bcells	AllCells	30	F	Hispanic	
CD19+ B Cells (neg. sel.)	PB-CD19+Bcells		23	M	African American	
CD4+ T cells	PB-CD4+Tcells	AllCells	24	M	Caucasian	
CD4+ T cells	PB-CD4+Tcells		21	M	Caucasian	
CD56+ NK Cells	PB-CD56+NKCells	AllCells	29	M	Caucasian	
CD56+ NK Cells	PB-CD56+NKCells		31	F	Hispanic	
CD8+ T cells	PB-CD8+Tcells	AllCells	29	F	Caucasian	
CD8+ T cells	PB-CD8+Tcells		22	M	Caucasian	

Bought as RNA

Sample	Atlas sample label	Vendor	Source	Lot #	Additional information
721 B lymphoblasts	721_B_lymphoblasts				Kavathas, P. et al., 1980. Proc Natl Acad Sci U S A 77:4251-4255.
adrenal gland	adrenal gland	Clontech	total RNA	1010548	Normal, pooled from 62 male/female caucasians; ages 15-61
amygdala	Amygdala	Clontech	poly A+	91122	no info
bonemarrow	bonemarrow	Clontech	total RNA	2011496	normal bone marrow pooled from 8 male/female Caucasians, ages 22-65; cause of death: Sudden death
caudate nucleus	caudate nucleus	Clontech	poly A+	120289	no info
cerebellum	cerebellum	Clontech	total RNA	1010033	normal from 25 y/o Asian male; cause of death: sudden death
colorectal adenocarcinoma	ColorectalAdenocarcinoma	Clontech	poly A+	1090559	SW480 cell line; ATCC# CCL 228
fetal brain	fetal brain	Clontech	total RNA	2020902	normal whole brains pooled from 59 spontaneously aborted male/female Caucasian fetuses, ages 20-33
fetal liver	fetal liver	Clontech	total RNA	110454	normal whole livers pooled from spontaneously aborted fetuses, ages 15-24 weeks
fetal lung	fetal lung	Clontech	poly A+	1040999	normal, whole lungs pooled from 38 spontaneously aborted male/female Caucasian fetuses, ages 22-27
heart	Heart	Clontech	total RNA	9020097	normal, whole heart from a 25-yr-old male Asian; cause of death: Sudden Death
Hypothalamus	Hypothalamus	Clontech	poly A+	2040567	normal hypothalamus pooled from 30 male/female Caucasians, ages 15-68; cause of death: sudden death
kidney	kidney	Clontech	total RNA	110679	normal, whole kidneys pooled from 6 female Caucasians, ages 28-52; cause of death: sudden death
leukemia, chronic Myelogenous K-562	leukemia chronic myelogenous (k562)	Clontech	poly A+	1060047	K-562 cell line; ATCC #CCL-243
leukemia, promyelocytic HL-60	leukemia promyelocytic (hl60)	Clontech	poly A+	6080170	normal, whole from a Caucasian
leukemia lymphoblastic (MOLT-4)	leukemia lymphoblastic (molt4)	Clontech	poly A+	1020175	normal, whole from a 19-yr-old male Caucasian
liver	Liver	Clontech	total RNA	2020453	normal whole liver from a 27 y/o male Asian; cause of death: sudden death
lung	Lung	Clontech	total RNA	1020471	normal from 2 male/female Caucasian ages 30-40 y/o; cause of death: sudden death

lymphnode	lymphnode	Clontech	poly A+	1090563	normal lymph nodes pooled from 30 male/female Caucasians, ages 20-61; cause of death: Sudden Death
lymphoma,burkitt's(Daudi)	lymphomaburkittsDaudi	Clontech	poly A+	1060332	Burkitt's Lymphoma, Daudi cell line; ATCC# CCL-213
Lymphoma,burkitt's(Raji)	lymphomaburkittsRaji	Clontech	poly A+	1070752	H. Burkitt's Lymphoma, Raji cell line; ATCC# CCL 86
pancreas	Pancreas	Clinomics	total RNA	custom	
placenta	PLACENTA	Clontech	total RNA	2041227	normal, 4 caucasians, ages 21-39
Prostate	Prostate	Clontech	total RNA	100649	normal, whole prostates pooled from 16 Caucasians, ages 21-50.; cause of death: trauma
spinalcord	spinalcord	Clontech	poly A+	111062	no info
testis	testis	Clontech	total RNA	120293	no info
thalamus	Thalamus	Clontech	poly A+	1070147	normal tissue pooled from 10 male/female Caucasians, ages 32-75; cause of death: trauma
thymus	thymus	Clontech	total RNA	111351	no info
thyroid	Thyroid	Clontech	total RNA	2010806	normal, whole thyroid glands pooled from 65 male/female Caucasians, ages 15-61; cause of death: Sudden Death
trachea	trachea	Clontech	total RNA	1010201	normal, whole trachea from a 17-70-yr-old male/female Caucasian; cause of death: Trauma
Uterus	Uterus	Clontech	total RNA	no info	no info
wholebrain	WholeBrain	Clontech	total RNA	9020101	normal, whole brain from a 28-yr-old male Asian; cause of death: sudden death

* Tissue samples often contain heterogenous cell populations (e.g., blood, vasculature, connective tissue).

† From Gino Van Heeke, Novartis cell line NHBE 6167.

‡ Novartis, Graeme Bilbe, Jose Crespo.