Appendix VI

The distribution of expressed sequence tags for human and mouse NCBTs, AE4, and BTR1 (see Sections V and VI)

The National Institutes of Health curate a database of the origins of deposited ESTs that provide an impression of the distributions of diverse genes within the human and mouse body (2). In **Table 1**, we reproduce the EST distribution data for all five human NCBTs plus AE4 and BTR1. In **Table 2**, we reproduce the EST distribution data for all five mouse NCBTs plus AE4 and BTR1. These data complement the distribution of NCBTs that has been disclosed by investigators in the field (e.g., Table 5 of the review) and suggest novel sites of NCBT expression. Blank cells indicate that there no EST sequences have been deposited for that SLC4 from that tissue/organ, but does not indicate the absence of SLC4 expression in that location. Note, for example, the lack of deposited NBCe2 ESTs from liver preparations, a site of abundant NBCe2 immunoreactivity (1).

Table 1: The distribution of NCBT (plus AE4 and BTR1) ESTs amplified from human cDNAs. For each tissue/organ, the table shows the number of ESTs isolated for each SLC4, as well as the total number of ESTs isolated from that source.

	NBCe1	NBCe2	NBCn1	NDCBE	NBCn2	AE4	BTR1		total
adipose tissue			2						12865
adrenal gland				2					32921
ascites			1				3		39829
bladder	2								29856
blood			1	2			6		122262
bone marrow			1	1					71609
bone marrow	1			2					48711
brain	57	10	14	39	35		9		1092524
cervix		1	1						48469
connective tissue	1		3						149048
ear									16098
embryonic tissue		2	12	5			3		212847
esophagus									20152
eye	3	4			2		7		208810
heart	1		1						89512
intestine	7		7				2		232030
kidney	61	3	4	1		13	1		210738
larynx			1						23489
liver	19		6						205232

	NBCe1	NBCe2	NBCn1	NDCBE	NBCn2	AE4	BTR1		total
lung	3	1	7	1	2	1	6		334751
lymph			1						44292
lymph node		1		1	1				89697
mammary gland		2	4	28					151228
mouth		1	1				5		66139
muscle	2		12	2					106323
nerve	1		1	2					15526
ovary	2		2	7			6		101482
pancreas	30	4		7	4		1		213410
parathyroid		1							20579
pharynx									40762
pituitary gland									16521
placenta			4						282968
prostate	52	1	3				2		189585
salivary gland									20264
skin	2		2				1		210718
spleen	2			2					53365
stomach	14		3						95775
testis		8	14	30	1	2			327305
thymus			5	1					79668
thyroid	1	6	2						46584
tonsil									17016
trachea	1		3	1			1		51769
umbilical cord									13764
uterus		1	6				1		232051
vascular	2		2						51637

Table 2: The distribution of NCBT (plus AE4 and BTR1) ESTs amplified from mouse cDNAs.

	NBCe1	NBCe2	NBCn1	NDCBE	NCBE/NBCn2	AE4	BTR1		total
adipose tissue									1564
adrenal gland	1								2044
bladder	2		6	1					13461
blood	1		1	1					16832
bone			4						32327
bone marrow			14				1		137491
brain	44	8	25	49	48		2		459991
connective tissue									19790
dorsal root ganglion	1		2	3					10186
embryonic tissue	6	18	28	11	5	5	34		664846
epididymis				1					2652
extraembryonic tissue		2		2					73200
eye	10	24	33	12	17		4		184900
fertilized ovum			2	2					26353
heart	2		2						52131
inner ear							153		37947
intestine	1		3						84236
joint							1		17136
kidney	90	1				18	8		122453
liver	9		1			2	2		108957
lung			7				1		96442
lymph node									15170
mammary gland	6		21	2			4		302624
molar			2						3601
muscle	1		3						27256
nasopharynx	3			1					8067
olfactory mucosa							3		3281
ovary	1	1	13	4					53434
oviduct			1						3201
pancreas			11		2				105756

	NBCe1	NBCe2	NBCn1	NDCBE	NCBE/NBCn2	AE4	BTR1		total
pineal gland		2							3914
pituitary gland									16965
prostate	1								29888
salivary gland									19345
skin	1		10	16			1		114950
spinal cord	6			4					21805
spleen	1		5		1	1			94430
stomach	1		1						29435
sympathetic ganglion	1								9045
testis	1		2	5		1			113759
thymus	4	1	7	3					116168
thyroid									8859
tongue									9861
turbinate									1383
uterus									6842
vagina									5171
vesicular gland									2187

References

1. **Abuladze N, Pushkin A, Tatishchev S, Newman D, Sassani P, and Kurtz I.** Expression and localization of rat NBC4c in liver and renal uroepithelium. *Am J Physiol Cell Physiol*, 2004.

2. **Sayers EW, Barrett T, Benson DA, Bolton E, Bryant SH, Canese K, Chetvernin V, Church DM, Dicuccio M, Federhen S, Feolo M, Fingerman IM, Geer LY, Helmberg W, Kapustin Y, Krasnov S, Landsman D, Lipman DJ, Lu Z, Madden TL, Madej T, Maglott DR, Marchler-Bauer A, Miller V, Karsch-Mizrachi I, Ostell J, Panchenko A, Phan L, Pruitt KD, Schuler GD, Sequeira E, Sherry ST, Shumway M, Sirotkin K, Slotta D, Souvorov A, Starchenko G, Tatusova TA, Wagner L, Wang Y, Wilbur WJ, Yaschenko E, and Ye J.** Database resources of the National Center for Biotechnology Information. *Nucleic Acids Res* 40: D13-D25, 2012.