



**Fig. S1.** The 3NT primary antibody is specific for nitrated tyrosine. **A:** Primary Delete: When the primary antibody was omitted during the staining protocol no staining was present. **B:** 3NT Preadsorption: When the 3NT primary antibody was preadsorbed with 12 mM of 3NT prior to use, no immunoreactivity was seen. **C:** L-tyrosine Preadsorption: When the 3NT primary antibody was preadsorbed with 12 mM of L-tyrosine the normal pattern of 3NT immunoreactivity was seen. **D:** Normal 3NT Primary Antibody: When the normal 3NT antibody was used in the protocol numerous nigral neurons were labeled with 3NT immunoreactivity. Together, these results show the 3NT primary antibody is specific for 3NT. Scale bar = 50  $\mu$ m in D (applies to A-D).

Supplemental Table 1. Estimated 3NT+ cell number, estimated 3NT+ cell volume ( $\mu\text{m}^3$ ), optical density of 3NT-ir, DAT-ir, VMAT-ir, and DAT/VMAT ratios in the vtSN, dtSN, and VTA of young, middle-age, and old-age monkeys

		Age Group		
		Young	Middle-age	Old-age
vtSN	3NT+ Cell #	89675 ± 5345	110446 ± 6222	107622 ± 7145
	3NT+ Cell Volume ( $\mu\text{m}^3$ )	8535 ± 518	8226 ± 558	9401 ± 567
	DAT Intensity	1060 ± 158	971 ± 104	741 ± 101
	VMAT Intensity	2059 ± 158	2081 ± 93	2186 ± 49
	DAT/VMAT	0.519 ± 0.032	0.466 ± 0.042	0.343 ± 0.053
	3NT Intensity	790 ± 111	765 ± 183	1656 ± 306
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dtSN	3NT+ Cell #	4268 ± 205	5152 ± 520	4716 ± 590
	3NT+ Cell Volume ( $\mu\text{m}^3$ )	8041 ± 1074	7869 ± 609	9018 ± 1079
	DAT Intensity	645 ± 125	746 ± 70	407 ± 41
	VMAT Intensity	1566 ± 189	1758 ± 70	1592 ± 57
	DAT/VMAT	0.397 ± 0.032	0.422 ± 0.030	0.256 ± 0.023
	3NT Intensity	391 ± 193	350 ± 92	609 ± 284
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VTA	3NT+ Cell #	17059 ± 2220	18013 ± 730	19985 ± 2913
	3NT+ Cell Volume ( $\mu\text{m}^3$ )	6156 ± 570	6304 ± 116	7664 ± 172
	DAT Intensity	860 ± 155	837 ± 87	611 ± 58
	VMAT Intensity	1926 ± 206	1919 ± 73	1949 ± 29

DAT/VMAT	0.441 ± 0.043	0.432 ± 0.042	0.311 ± 0.031
3NT Intensity	853 ± 143	974 ± 227	1587 ± 342

Data are presented as means ± SEM

Supplemental Table 2. DAT, VMAT, and DAT/VMAT ratios are predictors of 3NT levels in midbrain DA neurons.

Region	Marker	Age Group		
		Young	Middle-age	Old-age
vtSN	DAT	F(1,276) = 15.75, <b>p &lt; 0.001, R = 0.23</b>	F(1,633) = 95.06, <b>p &lt; 0.001, R = 0.36</b>	F(1,490) = 86.07, <b>p &lt; 0.001, R = 0.39</b>
	VMAT	F(1,276) = 34.70, <b>p &lt; 0.001, R = 0.33</b>	F(1,633) = 312.76, <b>p &lt; 0.001, R = 0.58</b>	F(1,490) = 163.51, <b>p &lt; 0.001, R = 0.50</b>
	DAT/VMAT ratio	F(1,276) = 0.94, p = 0.333, R = 0.06	F(1,633) = 3.62, p = 0.06, R = 0.08	F(1,490) = 17.89, <b>p &lt; 0.001, R = 0.19</b>
dtSN	DAT	F(1,159) = 0.38, p = 0.537, R = 0.05	F(1,315) = 69.76, <b>p &lt; 0.001, R = 0.43</b>	F(1,217) = 89.71, <b>p &lt; 0.001, R = 0.54</b>
	VMAT	F(1,159) = 0.62, p = 0.434, R = 0.06	F(1,315) = 145.56, <b>p &lt; 0.001, R = 0.56</b>	F(1,217) = 48.44, <b>p &lt; 0.001, R = 0.43</b>
	DAT/VMAT ratio	F(1,159) = 0.02, p = 0.894, R = 0.01	F(1,315) = 4.67, <b>p = 0.031, R = 0.12</b>	F(1,217) = 31.32, <b>p &lt; 0.001, R = 0.36</b>
VTA	DAT	F(1,177) = 6.26, <b>p = 0.013, R = 0.19</b>	F(1,420) = 63.93, <b>p &lt; 0.001, R = 0.36</b>	F(1,337) = 152.79, <b>p &lt; 0.001, R = 0.56</b>
	VMAT	F(1,177) = 17.67, <b>p &lt; 0.001, R = 0.30</b>	F(1,420) = 235.22, <b>p &lt; 0.001, R = 0.60</b>	F(1,337) = 210.59, <b>p &lt; 0.001, R = 0.62</b>
	DAT/VMAT ratio	F(1,177) = 0.24, p = 0.627, R = 0.04	F(1,420) = 1.75, p = 0.186, R = 0.06	F(1,337) = 54.00, <b>p &lt; 0.001, R = 0.37</b>