

AAV2 hA53T- α -syn Induced Mouse Model

Wild type mice that receive a single, unilateral injection of AAV2 hA53T- α -syn (human α -synuclein with A53T mutation) into the substantia nigra show selectively increased hA53T- α -syn protein levels in the substantia nigra as well as in the caudate putamen of the injected brain hemisphere. Contralateral to the injection side, hA53T- α -syn is not measurable. hA53T- α -syn expression leads to increased activated microglia as marker of neuroinflammation and even strongly decreased tyrosine hydroxylase (TH) levels in the injected substantia nigra.

- hA53T- α -syn in ipsilateral substantia nigra and caudate putamen
- Activated microglia in ipsilateral substantia nigra
- Reduced TH levels in ipsilateral substantia nigra

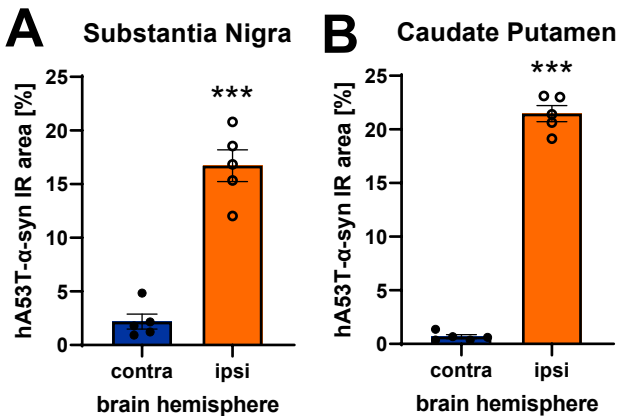


Figure 1: hA53T- α -syn immunoreactive area (IR) in the substantia nigra (A) and caudate putamen (B) of contra- and ipsilateral hemispheres after unilateral AAV2 hA53T- α -syn injection into the substantia nigra of the ipsilateral hemisphere. Animals were euthanized 9 weeks after injection and brains evaluated using a human-specific α -syn antibody. n = 5 / group; unpaired t-test; Mean \pm SEM. ***p < 0.001.

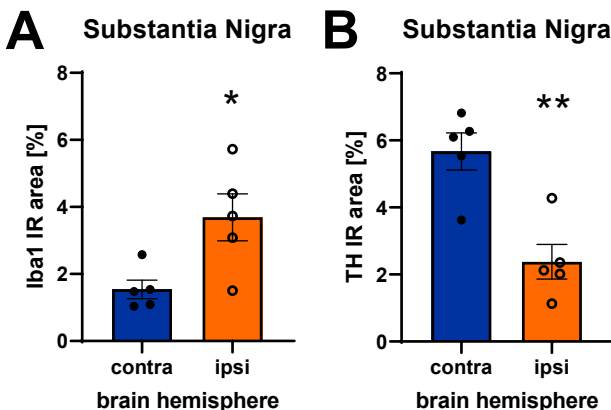


Figure 2: Iba1 (A) and TH (B) immunoreactive area (IR) in the substantia nigra of contra- and ipsilateral hemispheres after unilateral AAV2 hA53T- α -syn injection into the substantia nigra of the ipsilateral hemisphere. Animals were euthanized 9 weeks after injection. n = 5 / group; unpaired t-test; Mean \pm SEM. *p < 0.05; **p < 0.01.