

# Supporting Information

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**Table S1. Experimental animals, second-order cells**

Exp.	Age, mo	Sex	Weight, kg	Muscle	Vol, mL	Time, h	CM cells, no.	Virus batch*
JA39	65	M	7.3	lTri	1.5	107	272	09/04
JA49	39	F	4.5	lTri	1.0	84	158	05/06
JA51	38	F	4.5	SpD	0.5	80.5	334	05/06
JA54	36	F	3.9	SpD	0.5	80	814	05/06

The table lists information about the 4 animals included in the analysis of elbow and shoulder cortico-motoneuronal (CM) cells. Exp, the animal number; lTri, lateral head of the triceps; SpD, spinodeltoid muscle; Vol, the amount of virus injected into the muscle; Time, the survival time after injection of virus; CM cells, number of labeled CM cells in areas 4 and 3a (the values have been adjusted for the number of sections scanned; cell counts include labeled somas in which the nucleus was in the plane of the section).

\*Virus batch, the batch of rabies N2c strain injected. We used 2 batches of virus in these experiments; batches differed in their rate of retrograde transneuronal transport to second-order neurons.

**Table S2. Experimental animals, third-order cells**

Exp.	Age, mo	Sex	Weight, kg	Muscle	Vol, mL	Time, h	Virus batch*
JA7	>40	F	4.2	EDC	0.5	121	04/98
JA9	46	M	5.2	EDC	0.5	128	04/98
JA20	52	M	4.4	EDC	0.5	126	12/00
JA29	36	M	3.8	ABPL	0.25	108	06/03
JA42	57	F	5.7	SpD	0.5	108	09/04
JA43	60	F	5.0	SpD	0.5	95.5	11/05
JA48	38	F	4.8	SpD	0.5	86.5	05/06
JA53	35	F	4.5	SpD	0.5	95	05/06

The table lists information about the 8 animals included in the analysis of transport to third-order neurons in layer III. The format is the same as Table S1. EDC, extensor digitorum communis; ABPL, abductor pollicis longus.

\*We used 6 batches of virus in these experiments; batches of virus differed in their rate of retrograde transneuronal transport to third-order neurons.