

(cell # in paper) cell ID	position	somatodendritic type (Lima and Coimbra, 1986)	axon			3-D
			midline crossing	ascending	ipsilateral collaterals	
(8) ZS-022-c-E8	OUT	NA	PC-AC	i-ALT	L-III/IV, L-X	+
(9) ZS-074-E12	OUT	NA	PC	c-ALT	L-IV	+
(10) ZS-079-E13*	OUT	multipolar	-	-	LCN	+
(16) ZS-107-E12	OUT	NA	AC	c-ALT, i-DLF	DLF-caudal, L-I, L-III/IV	+
(17) ZS-120-E14	OUT	NA	AC	c-ALT, i-DLF	Lissauer-tract	+
ZS-121-E12**	OUT	multipolar	-	-	LCN	+
(19) ZS-127-E12	OUT	NA	PC-AC	i-ALT	L-III/IV	+
(20) ZS-127-PreE12	OUT	NA	PC-AC	i-ALT	L-III/IV, L-X, L-VII	+
(21) ZS-161-E12-1	OUT	NA	PC	c-ALT	L-I/II	+
(22) ZS-161-E12-2***	OUT	NA	PC	c-ALT	L-III/IV, L-X	+
(24) ZS-026-r-E8	LSN	NA	PC	c-ALT	DLF, L-X	+
(25) ZS-030-E8	LSN	NA	AC	c-ALT, i-DF	DLF-caudal	+
(26) ZS-034-E8	LSN	NA	AC	c-ALT, i-DF	DLF-caudal	+
(27) ZS-089-E15	LSN	NA	PC-AC	i-ALT	-	+
(28) ZS-100-E14	LSN	NA	PC	c-ALT	L-VII	+
(30) ZS-158-E14	LSN	NA	PC	c-ALT	L-V/VI, L-X	+
(32) ZS-172-E12	LSN	NA	PC-AC	i-ALT	L-V/VI	+

\* Also presented on Figure 4 in Szucs et al., 2013 (PMID: 23386329)

\*\* LCN neuron recorded in the same spinal cord as ZS-120-E14. Axon not too dense. Main axon splits in two and caudally going branch gives some collaterals. Rostral collateral is short as cell is close to rostral end of the lumbar spinal cord preparation.

\*\*\* Very rich collateral network almost like an LCN, lots of axon varicosities.

### Position, somatodendritic type and axon trajectory of the recovered neurons

Blue values indicate neurons with a projection axon crossing in the posterior commissure and ascending in the c-ALT. Red values indicate double crossing, i-ALT ascending neurons. Green values indicate neurons with bilateral (ipsi and contra) ascending axon, *L-I* lamina I, *OUT* between the lateral edge of the dorsal grey and the LSN, *LSN* lateral spinal nucleus, *NA* not applicable, *AC* anterior commissure, *PC* posterior commissure, *c-ALT* contralateral anterolateral tract, *i-ALT* ipsilateral anterolateral tract, *DLF* dorsolateral funiculus, *DF* dorsal funiculus, *L-I-X* lamina I-X, *3-D* neuron reconstructed in three-dimensions with Neurolucida, *DCT* dorsal collateral type projection neuron (see Szucs et al., 2010), *MCT* mixed collateral type projection neuron (see Szucs et al., 2010), *LCT* lateral collateral type projection neuron (see Szucs et al., 2010)