Figure S1

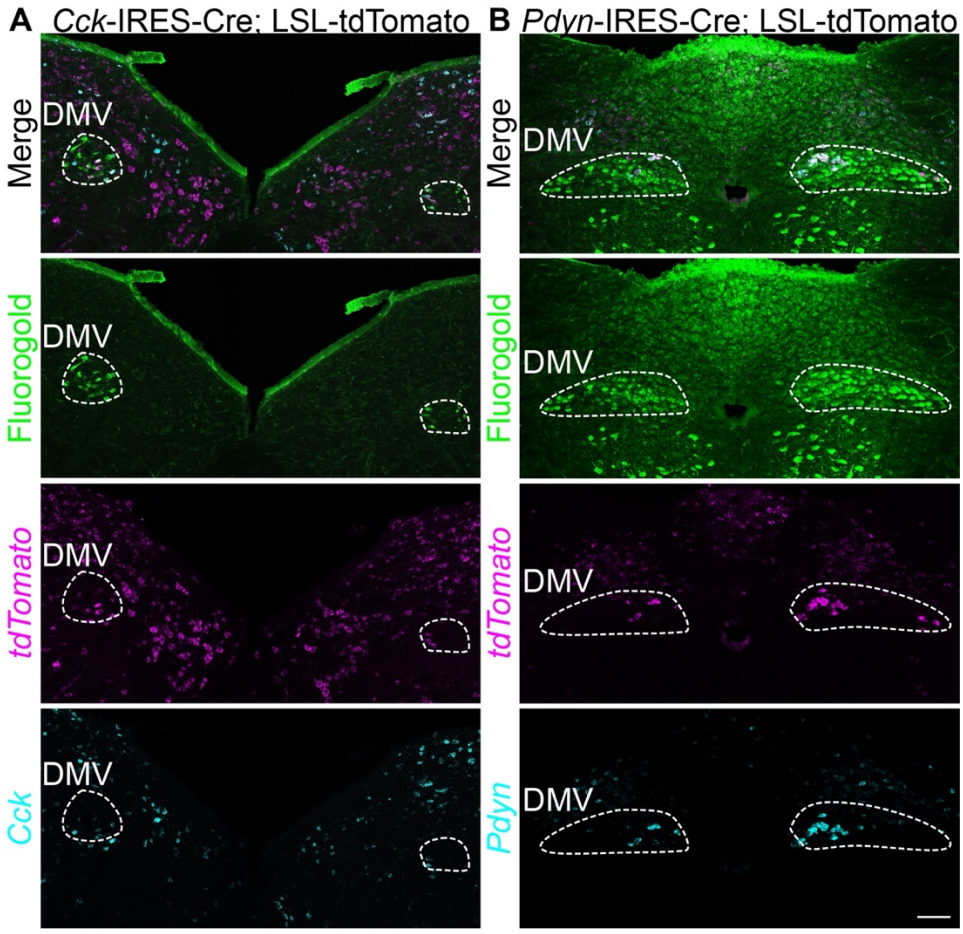
A Cck-IRES-Cre; LSL-tdTomato
B Pdyn-IRES-Cre; LSL-tdTomato
Merge
Fluorogold
tdTomato
Cck
Pdyn
DMV

Figure S1. Validation of *Cck*-IRES-Cre and *Pdyn*-IRES-Cre mice, Related to Figure 3
(A) *In situ hybridization* of *Cck* and tdTomato expression in the DMV of *Cck*-IRES-Cre; LSL-tdTomato mice (n = 2). 63.1% of *Cck*+ neurons are tdTomato+ and 77.9% of tdTomato+ neurons are *Cck*+; scale bar: 200 μm.
(B) *In situ hybridization* of *Pdyn* and tdTomato expression in the DMV of *Pdyn*-IRES-Cre; LSL-tdTomato mice (n = 2). 63.6% of *Pdyn*+ neurons are tdTomato+ and 83.4% of tdTomato+ neurons are *Pdyn*+; scale bar: 200 μm.

Figure S2

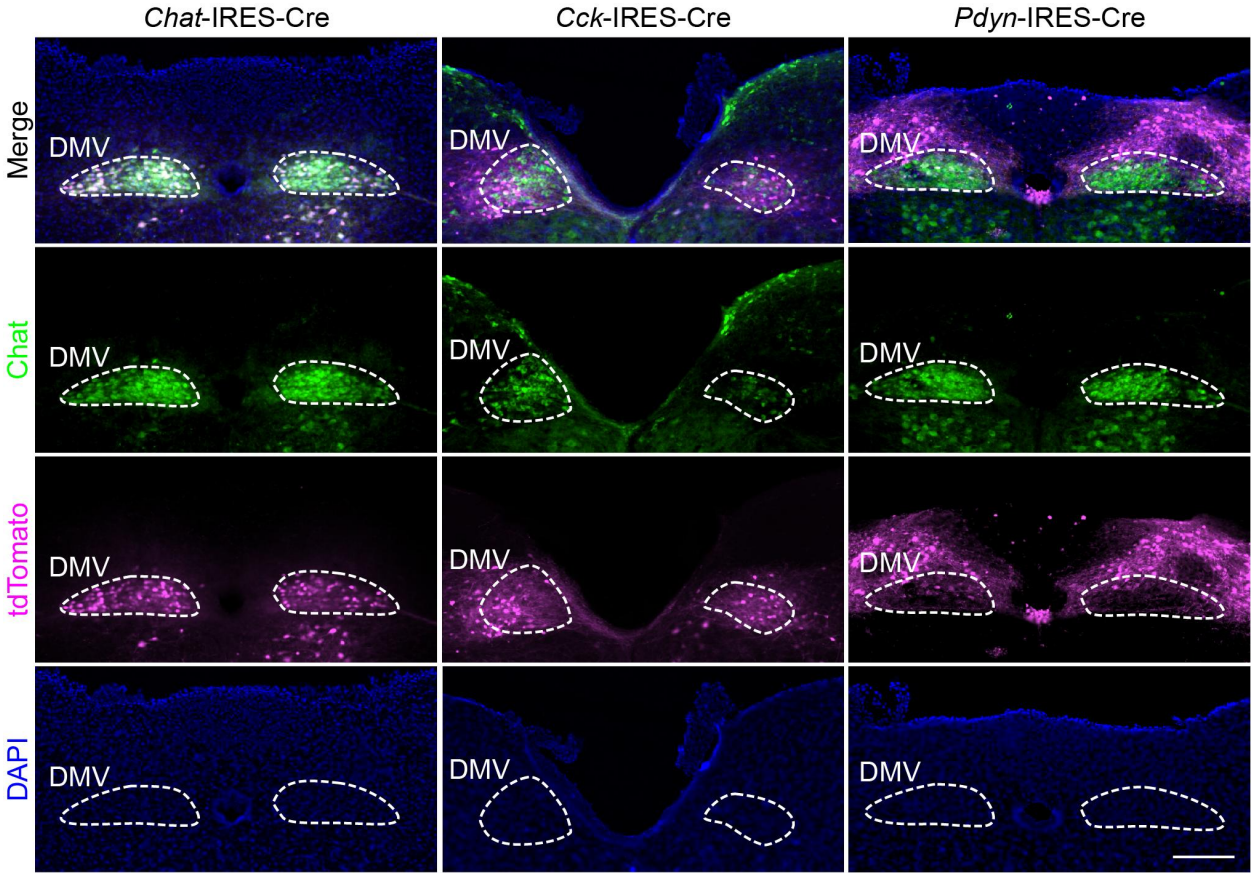
Chat-IRES-Cre
Cck-IRES-Cre
Pdyn-IRES-Cre
Merge
Chat
tdTomato
DAPI
DMV

Figure S2. Genetic Access to *Chat*+, *Cck*+, and *Pdyn*+ DMV neurons, Related to Figure 3
(A) tdTomato expression in the DMV of *Chat*-IRES-Cre, *Cck*-IRES-Cre, and *Pdyn*-IRES-Cre mice following brainstem injection of AAV-FLEX-tdTomato; scale bar: 200 μm.

Figure S3

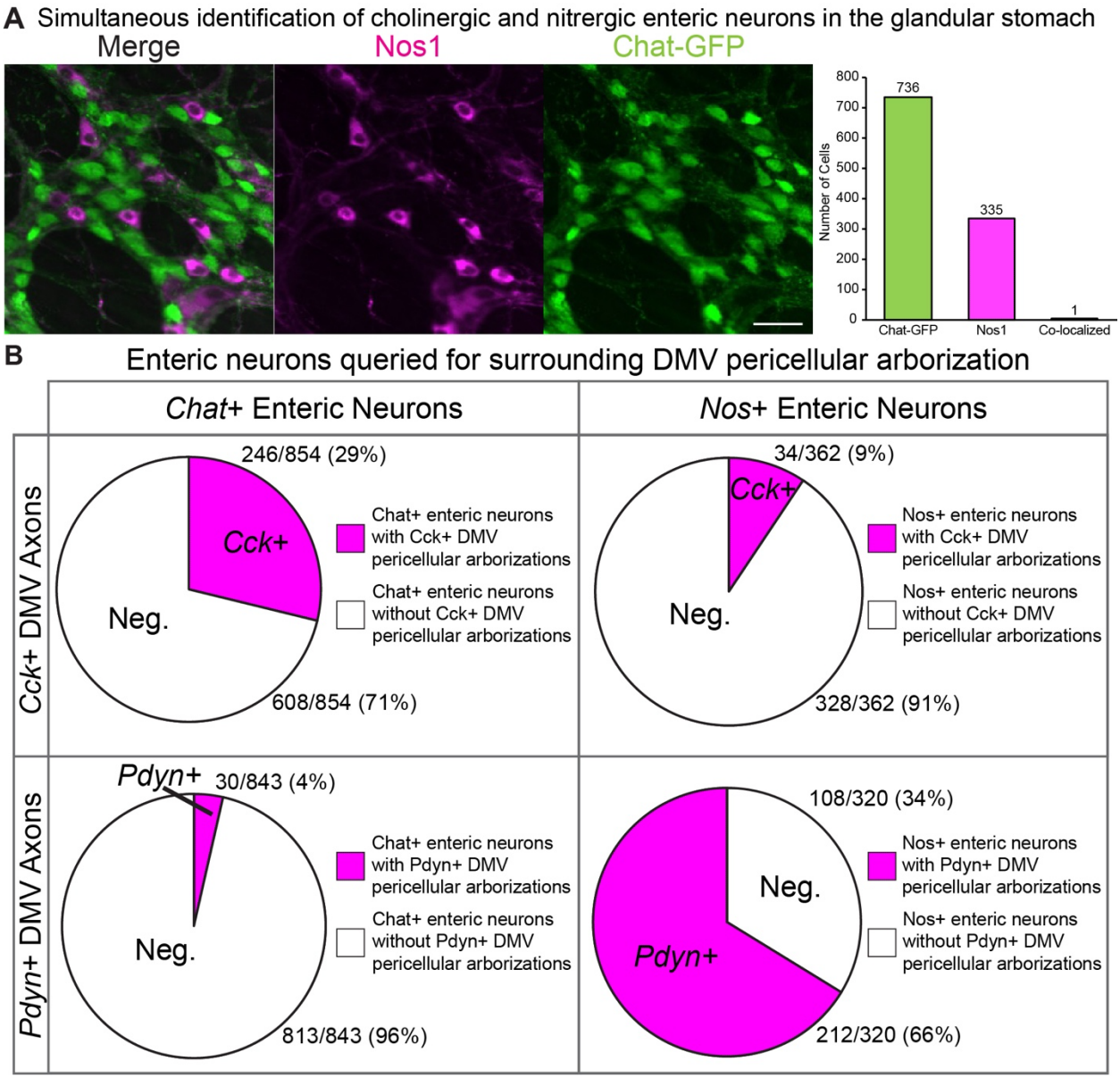
A Simultaneous identification of cholinergic and nitrergic enteric neurons in the glandular stomach
Merge
Nos1
Chat-GFP
Number of Cells
800
700
600
500
400
300
200
100
0
736
335
1
Chat-GFP
Nos1
Co-localized
B
Enteric neurons queried for surrounding DMV pericellular arborization
Chat+ Enteric Neurons
Nos+ Enteric Neurons
Cck+ DMV Axons
Pdyn+ DMV Axons
246/854 (29%)
Cck+
Neg.
608/854 (71%)
Chat+ enteric neurons with Cck+ DMV pericellular arborizations
Chat+ enteric neurons without Cck+ DMV pericellular arborizations
34/362 (9%)
Cck+
Neg.
328/362 (91%)
Nos+ enteric neurons with Cck+ DMV pericellular arborizations
Nos+ enteric neurons without Cck+ DMV pericellular arborizations
Pdyn+
30/843 (4%)
Neg.
813/843 (96%)
Chat+ enteric neurons with Pdyn+ DMV pericellular arborizations
Chat+ enteric neurons without Pdyn+ DMV pericellular arborizations
108/320 (34%)
Neg.
Pdyn+
212/320 (66%)
Nos+ enteric neurons with Pdyn+ DMV pericellular arborizations
Nos+ enteric neurons without Pdyn+ DMV pericellular arborizations

Figure S3. Enteric Neurons With or Without Surrounding DMV Pericellular Arborization, Related to Figure 4.

(A) Number of enteric neurons in the glandular stomach marked by Chat-GFP, Nos1, or both (n = 2); scale bar: 50 μm.

(B) Numbers of enteric neurons in the glandular stomach with or without DMV pericellular arborizations in *Cck*-IRES-Cre (n = 3), *Cck*-IRES-Cre;*Chat*-GFP (n = 3), *Pdyn*-IRES-Cre (n = 3), and *Pdyn*-IRES-Cre;*Chat*-GFP (n = 3) mice.