**Description of Additional Supplementary Files**

**File name: Chouaib et al - 2025 - Supplementary information**

Description: Contains the Supplementary Figures 1-15 and Supplementary Tables 1-7.

**File Name: Chouaib et al 2024 - Supplementary video 1.mp4**

Exemplary video of an exocytosis event of a lytic granule visualized through pH-sensitive fluorescent cargo protein.

**File Name: Chouaib et al 2024 - Supplementary video 2.mp4**

Description: Exemplary video of an exocytosis event of a lytic granule visualized with pH-insensitive fluorescent cargo protein.

**File Name: Chouaib et al 2024 - Supplementary video 3.mp4**

Description: Exemplary video of an exocytosis event of a lytic granule visualized with pH-insensitive fluorescent membrane protein.

**File Name: Chouaib et al 2024 - Supplementary video 4.mp4**

Description: Exemplary video of an exocytosis event of a lytic granule visualized with pH-sensitive fluorescent membrane protein.

**File Name: Chouaib et al 2024 - Supplementary video 5.mp4**

Description: Exemplary video of individual synaptic transmission events between dorsal root ganglion neurons and spinal cord neurons.

**File Name: Chouaib et al - 2025 - Source Data.xlsx**

Description: this is the Source data file