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| **Protein** | **Validation in literature (see reference list, below)** | **Validation in this manuscript** |
| 1. Vti1a(0001) | * [1–3] | EGF and Transferrin experiments  (Suppl. Fig. 7) |
| 1. Syntaxin4(0010) | * [4,5] * Synuclein Nanobody epitopes / tags are short [6–8] | EGF and Transferrin experiments  (Suppl. Fig. 8) |
| 1. Syntaxin6(0011) | * [1] * Synuclein Nanobody epitopes / tags are short [6–8] | EGF and Transferrin experiments (Suppl. Fig. 9) |
| 1. GFP(0100) | * No known function, therefore no functional validation needed; only verification of localization needed. | Colocalization assays  (Suppl. Fig. 5) |
| 1. STX7(0101) | * [9–11] and probably others as well | EGF and Transferrin experiments  (Suppl. Fig. 10) |
| 1. GalNacT(0110) | * Localization is related to fuction, so was investigated here [12]. | Colocalization assays  (Suppl. Fig. 5) |
| 1. Endobrevin(0111) | * [13,14] | EGF and Transferrin experiments  (Suppl. Fig. 11) |
| 1. TOM70(1000) | * No known function, therefore no functional validation needed; only verification of localization needed. | Colocalization assays  (Suppl. Fig. 5) |
| 1. LifeAct(1001) | * Actin-binding molecule, designed to be tagged [15]. | EGF and Transferrin experiments  (Suppl. Fig. 12) |
| 1. Rab5a(1010) | * [1,2,16,17] | EGF and Transferrin experiments  (Suppl. Fig. 13) |
| 1. STX13(1011) |  | EGF and Transferrin experiments  (Suppl. Fig. 14) |
| 1. SNAP25(1100) | * Tested in cell lines [1,18–20] | STED SNAP25 (PC 12 cells)  (Suppl. Fig. 16) |
| 1. NLS(1101) | * No known function, therefore no functional validation needed; only verification of localization needed. | Colocalization assays  (Suppl. Fig. 5) |
| 1. KDEL(1110) | * No known function, therefore no functional validation needed; only verification of localization needed. | Colocalization assays  (Suppl. Fig. 5) |
| 1. VAMP4(1111) | * [1,21,22] | EGF and Transferrin experiments  (Suppl. Fig. 15) |

**Supplementary Table 1. Protein tag validation in literature and/or in this manuscript.**

**Reference List for Supplementary Table 1.**

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