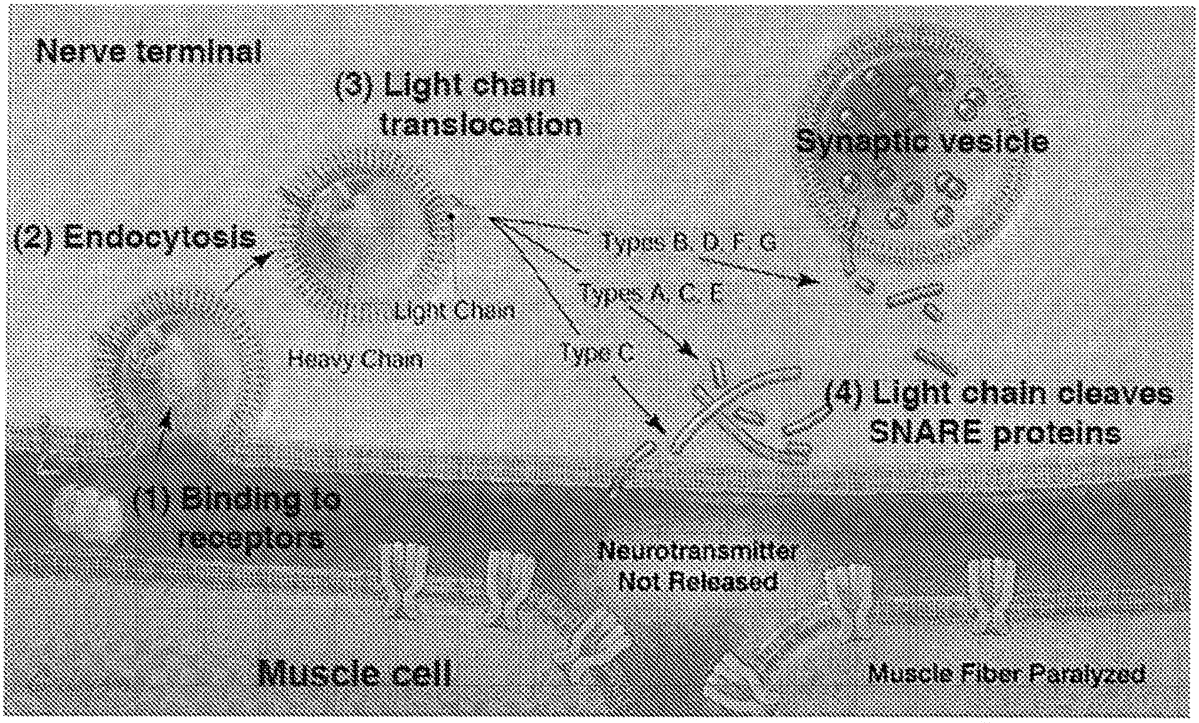

Nerve terminal
(3) Light chain translocation
Synaptic vesicle
(2) Endocytosis
Types B, D, F, G
Types A, C, E
Light Chain
Heavy Chain
Type C
(4) Light chain cleaves SNARE proteins
(1) Binding to receptors
Neurotransmitter Not Released
Muscle cell
Muscle Fiber Paralyzed

FIG. 1A

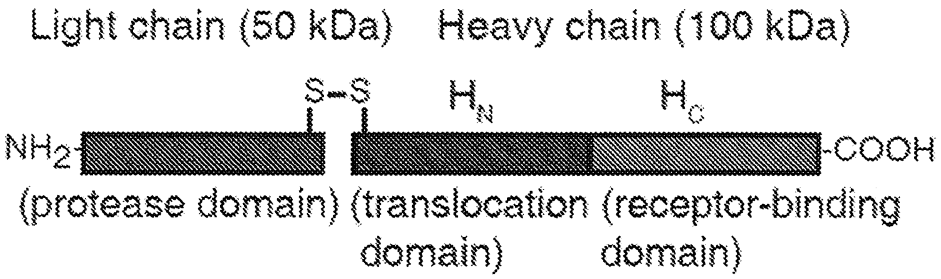

Light chain (50 kDa)
Heavy chain (100 kDa)
S–S
H_N
H_C
NH_2
-COOH
(protease domain)
(translocation domain)
(receptor-binding domain)

FIG. 1B

Toxins	Protein Receptors
BoNT/B, G, D-C	Synaptotagmin I and II (Syt I/II)
BoNT/A, E, D, F	SV2A, B, and C

FIG. 1C

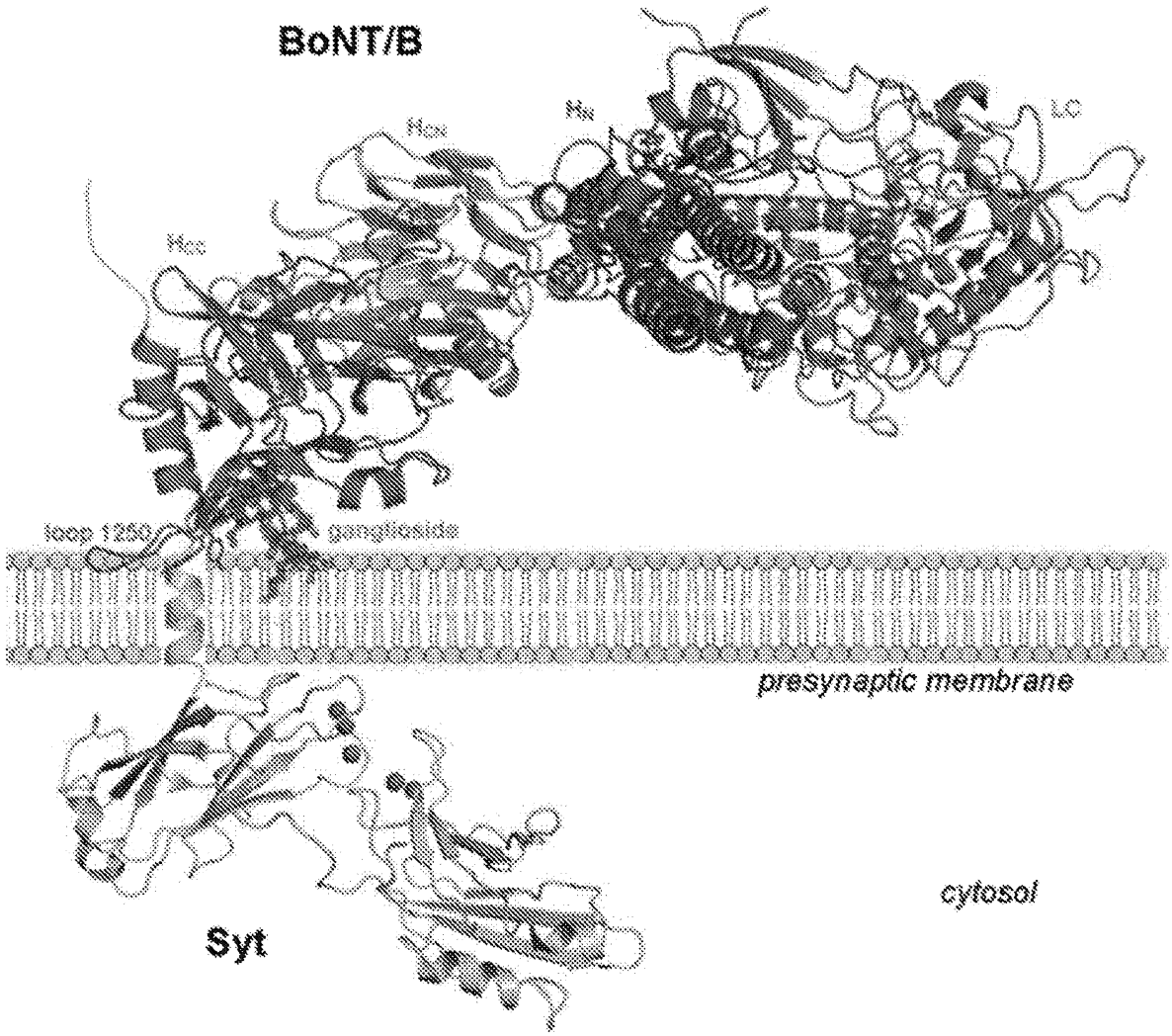


FIG. 1D

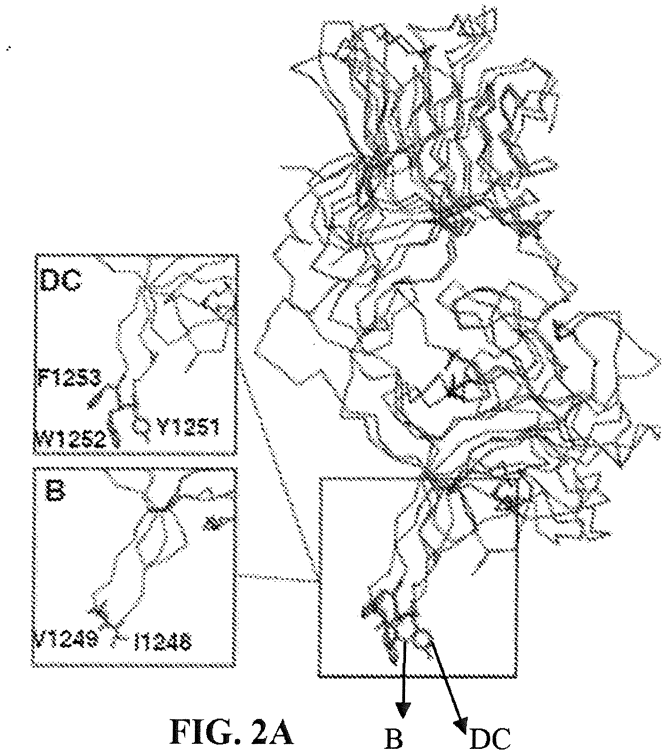


FIG. 2A

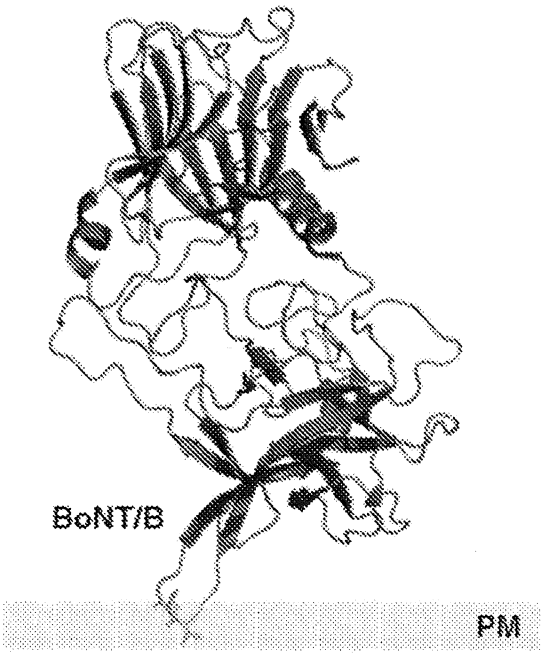


FIG. 2B

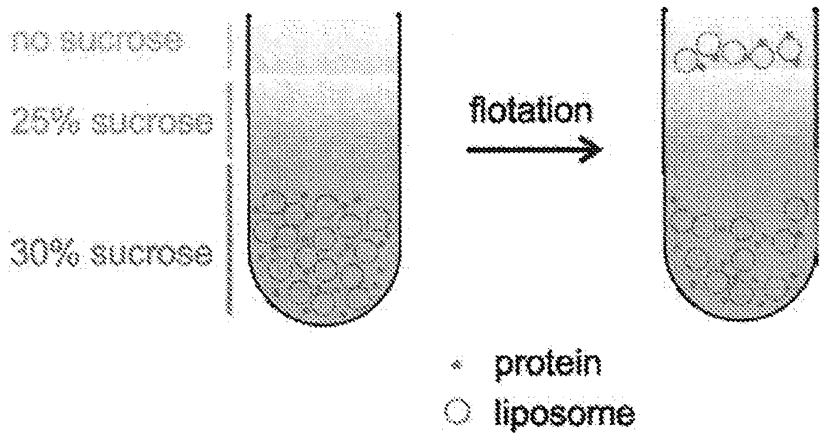

no sucrose
25% sucrose
30% sucrose
flotation
protein
liposome

FIG. 3A

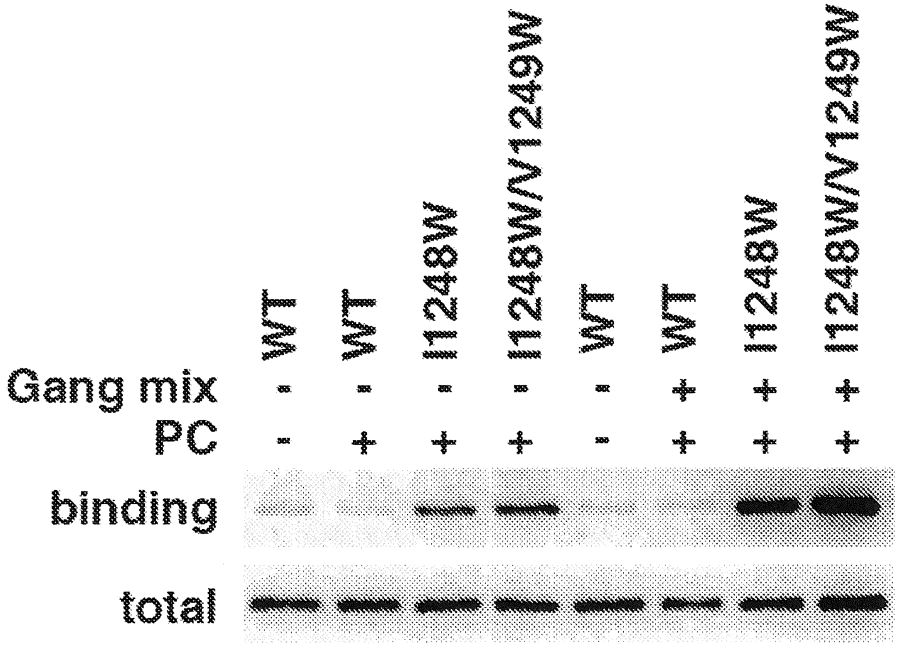

- WT
- WT
- I1248W
- I1248W/V1249W
- WT
+ WT
+ I1248W
+ I1248W/V1249W
Gang mix
PC
binding
total

FIG. 3B

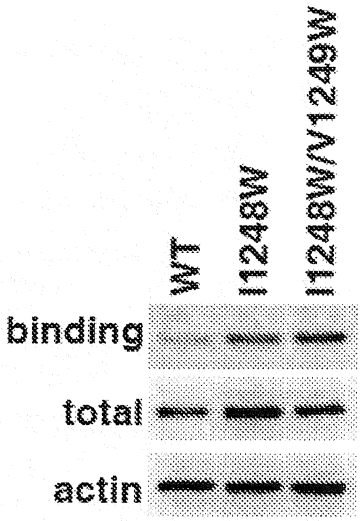

WT
I1248W
I1248W/V1249W
binding
total
actin

FIG. 4A

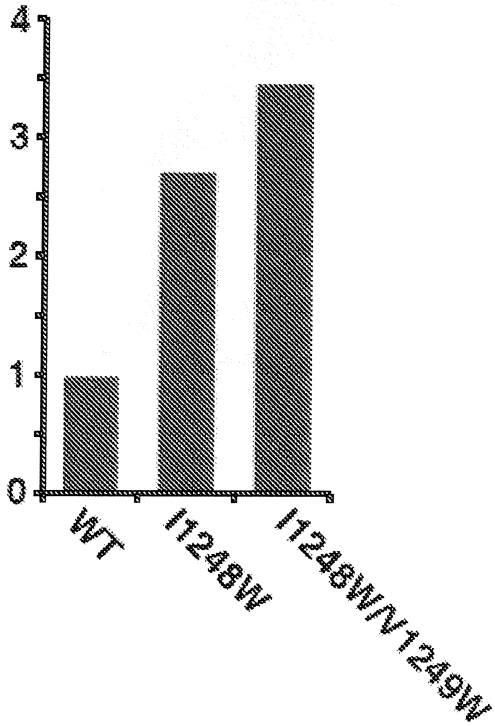

4
3
2
1
0
WT
I1248W
I1248W/V1249W

FIG. 4B

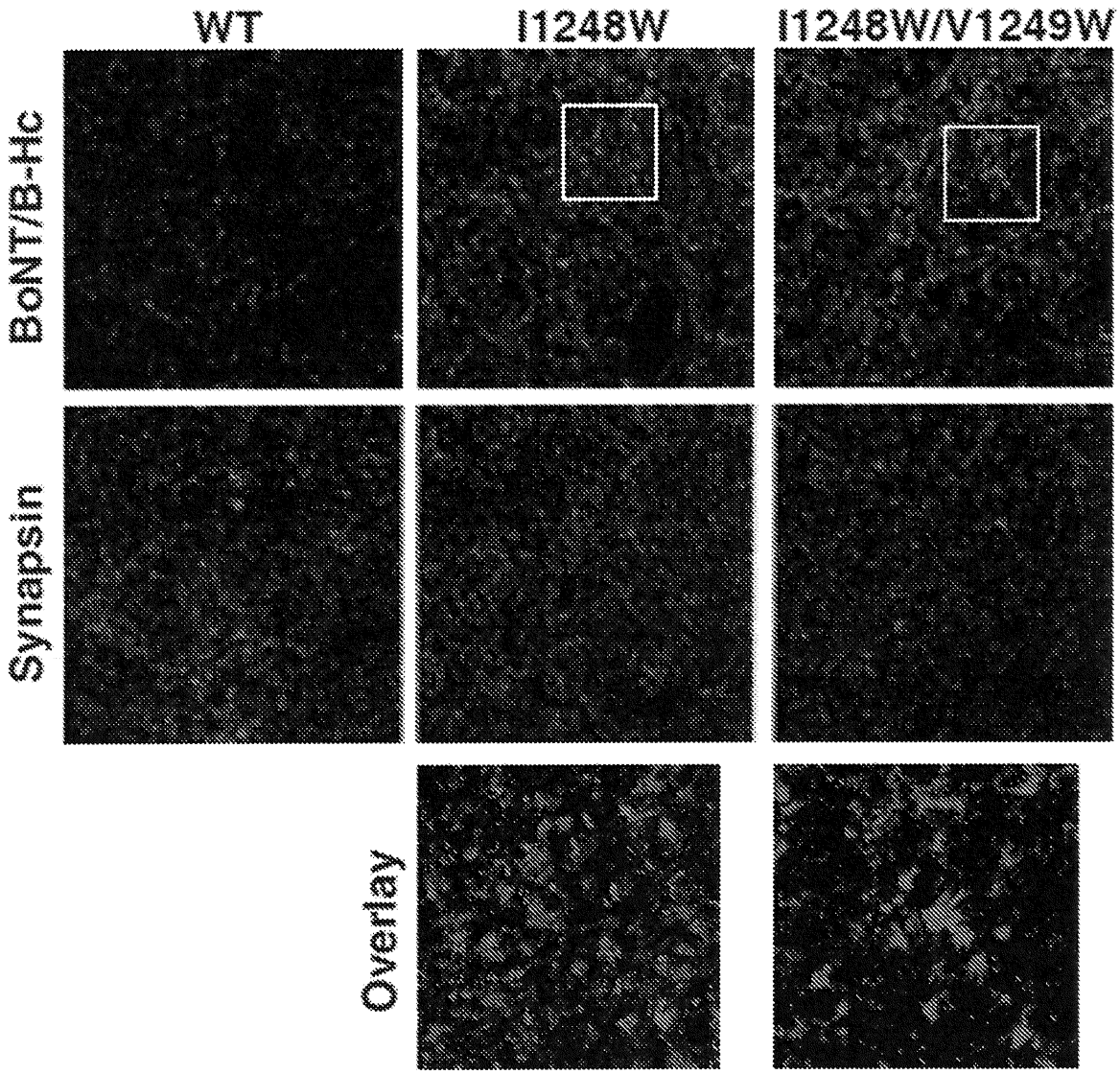


FIG. 5