ABSTRACT

ENGINEERED BOTULINUM NEUROTOXIN

Disclosed herein are botulinum neurotoxin (BoNT) polypeptides with a modified receptor binding domain of Clostridial botulinum serotype B (B-Hc), comprising one or more substitution mutations corresponding to substitution mutations in serotype B, strain 1, V1118M; Y1183M; E1191M; E1191I; E1191Q; E1191T; S1199Y; S1199F; S1199L; S1201V; or combinations thereof. Specific combination mutations include E1191M and S1199L, E1191M and S1199Y, E1191M and S1199F, E1191Q and S1199L, E1191Q and S1199Y, or E1191Q and S1199F. Other substitution mutations are also disclosed. Isolated modified receptor binding domains, chimeric molecules, pharmaceutical compositions, and methods of using the same are also disclosed.

Figure 6A