

Amended claims

1. A method of detecting botulinum neurotoxin serotype A (BoNT/A) activity in a sample, the method comprising the steps of:
 - a. contacting a cell from an established cell line expressing a SNAP-25 polypeptide consisting essentially of at least a portion of a SNAP-25 cleavable by BoNT/A with a sample suspected of comprising BoNT/A, wherein the sequence surrounding a BoNT/A cleavage site present in the SNAP-25 is denoted as $P_5-P_4-P_3-P_2-P_1-P_1'-P_2'-P_3'-P_4'-P_5'$, with P_1-P_1' representing the scissile bond, and wherein the established cell line is susceptible to BoNT/A intoxication;
 - b. isolating polypeptides from the cell;
 - c. contacting the polypeptides with a monoclonal antibody that specifically binds to the SNAP-25 having a carboxyl-terminus at the P_1 residue of the BoNT/A cleavage site scissile bond, wherein said antibody specifically binds to an epitope comprising said SNAP-25 having a carboxyl-terminus at the P_1 residue of the BoNT/A cleavage site scissile bond; and
 - d. detecting the presence of any antibody-antigen complex comprising the antibody and said SNAP-25 polypeptide having a carboxyl-terminus at the P_1 residue of the BoNT/A cleavage site scissile bond,

wherein a higher amount of the antibody-antigen complex detected correlates to a higher amount of BoNT/A in the sample,

wherein the method detects attomolar quantities of BoNT/A in the sample,

and wherein the method is performed as a PK assay to detect the presence of BoNT/A in mammalian fluids.

2. The method of claim 1, wherein the presence of an antibody-antigen complex is detected using a sandwich ELISA.
3. The method of claim 1, wherein the presence of an antibody-antigen complex is detected