

Resource Summary Report

Generated by [NIF](#) on Jul 30, 2026

BoNT/A-LC

RRID:Addgene_31602

Type: Plasmid

Proper Citation

RRID:Addgene_31602

Plasmid Information

URL: <http://www.addgene.org/31602>

Proper Citation: RRID:Addgene_31602

Insert Name: BoNT/A LC

Bacterial Resistance: Ampicillin

Defining Citation: [PMID:18940613](#)

Vector Backbone Description: Backbone Size:0; Vector Backbone:pBN3; Vector Types:Bacterial Expression; Bacterial Resistance:Ampicillin

Comments: The author states that although the construct is from a toxic protein, it only contains one third of the biologically active protein, i.e., it is inactive and harmless per se, and it does not require BL4 level for its expression/manipulation. Toxic BoNT/A is made of two 'chains' (i.e. polypeptides) linked to each other by one disulfide bond. The light chain (LC) is 50KDa long, whereas the heavy chain (HC) is 100 KDa. The HC is necessary for the toxin to target and enter motoneurons. This construct is the LC of BoNTA, and it completely lacks the HC, so it is unable to intoxicate neurons. Protein sequence of BoNT/A fragment present in this plasmid (corresponds to YP_001386738.1)

MSGLEVSFEELRTFGGHDAKFIDSLQENEFRLYYYNKFKDIASTLNKAKSIVGTTASLQYMKNVFKER
Nucleotide sequence of BoNT/A fragment present in this plasmid based on Addgene's Sanger sequencing results:

ATGAGTGGGTTAGAAGTAAGCTTTGAGGAACTTAGAACATTTGGGGGACATGATGCAAAGTTTA

Plasmid Name: BoNT/A-LC

Record Creation Time: 20220422T222137+0000

Record Last Update: 20260725T074544+0000

Ratings and Alerts

No rating or validation information has been found for BoNT/A-LC.

No alerts have been found for BoNT/A-LC.

Data and Source Information

Source: [Addgene](#)

Usage and Citation Metrics

We found 1 mentions in open access literature.

Listed below are recent publications. The full list is available at [NIF](#) .

Mu Y, et al. (2018) NUPR1 maintains autolysosomal efflux by activating SNAP25 transcription in cancer cells. Autophagy, 14(4), 654.