Supplementary Materials: Structural and Biochemical Characterization of Botulinum Neurotoxin Subtype B2 Binding to Its Receptors

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Complete sequences of protein constructs used in this study:

BONT binding domain (HC) used for all experiments

>His-FLAG-TEV-HC/B1

MGHHHHHHSGDYKDDDDKEDLYFQSHMNSEILNNIILNLRYKDNNLIDLSGYGAKVEVYDGVE
LNDKNQFKLTSSANSKIRVTQNQNIIFNSVFLDFSVSFWIRIPKYKNDGIQNYIHNEYTIINCMKNN
SGWKISIRGNRIIWTLIDINGKTKSVFFEYNIREDISEYINRWFFVTITNNLNNAKIYINGKLESNTDI
KDIREVIANGEIIFKLDGDIDRTQFIWMKYFSIFNTELSQSNIEERYKIQSYSEYLKDFWGNPLMYNK
EYYMFNAGNKNSYIKLKKDSPVGEILTRSKYNQNSKYINYRDLYIGEKFIIRRKSNSQSINDDIVRKE
DYIYLDFFNLNQEWRVYTYKYFKKEEEKLFLAPISDSDEFYNTIQIKEYDEQPTYSCQLLFKKDEEST
DEIGLIGIHRFYESGIVFEEYKDYFCISKWYLKEVKRKPYNLKLGCNWQFIPKDEGWTE

>His-FLAG-TEV-HC/B2

MGHHHHHHSGDYKDDDDKEDLYFQSHMNSEILNNIILNLRYRDNNLIDLSGYGANVEVYDGVE
LNDKNQFKLTSSTNSEIRVTQNQNIIFNSMFLDFSVSFWIRIPKYKNDGIQNYIHNEYTIINCIKNNS
GWKISIRGNRIIWTLTDINGKTKSVFFEYSIREDISDYINRWFFVTITNNSDNAKIYINGKLESNIDIK
DIGEVIANGEIIFKLDGDIDRTQFIWMKYFSIFNTELSQSNIKEIYKIQSYSEYLKDFWGNPLMYNKE
YYMFNAGNKNSYIKLKKDSSVGEILTRSKYNQNSNYINYRNLYIGEKFIIRRKSNSQSINDDIVRKE
DYIYLDFFNSNREWRVYAYKDFKEEEKKLFLANIYDSNEFYKTIQIKEYDEQPTYSCQLLFKKDEES
TDEIGLIGIHRFYESGIVLKDYKNYFCISKWYLKEVKRKPYNPNLGCNWQFIPKDEGWIE

Protein receptors used in the synaptotagmin-binding assays

>GST-hSytI

MSPILGYWKIKGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLT
QSMAIIRYIADKHNMLGGCPKERAEISMLEGAVLDIRYGVSRIAYSKDFETLKVDFLSKLPEMLKM
FEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPQIDKYLKSSK
YIAWPLQGWQATFGGGDHPPKSDLIEGRGIPGHHHHHHHGMVSESHHEALAAPPVTTVATVL
PSNATEPASPGEGKEDAFSKLKEKFMNELHK

>GST-hSytII

MSPILGYWKIKGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLT
QSMAIIRYIADKHNMLGGCPKERAEISMLEGAVLDIRYGVSRIAYSKDFETLKVDFLSKLPEMLKM
FEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPQIDKYLKSSK
YIAWPLQGWQATFGGGDHPPKSDLIEGRGIPGHHHHHHHGMRNIFKRNQEPIVAPATTTATM
PIGPVDNSTESGGAGESQEDMFAKLKEKLFNEINK

>GST-rSytII

MSPILGYWKIKGLVQPTRLLLEYLEEKYEEHLYERDEGDKWRNKKFELGLEFPNLPYYIDGDVKLT
QSMAIIRYIADKHNMLGGCPKERAEISMLEGAVLDIRYGVSRIAYSKDFETLKVDFLSKLPEMLKM
FEDRLCHKTYLNGDHVTHPDFMLYDALDVVLYMDPMCLDAFPKLVCFKKRIEAIPQIDKYLKSSK

YIAWPLQGWQATFGGGDHPPKSDLIEGRGIPGHHHHHHHGMRNIFKRNQEPIVAPATTTATM
PLAPAAPADNSTESTGTGESQEDMFAKLKDKFFNEINK