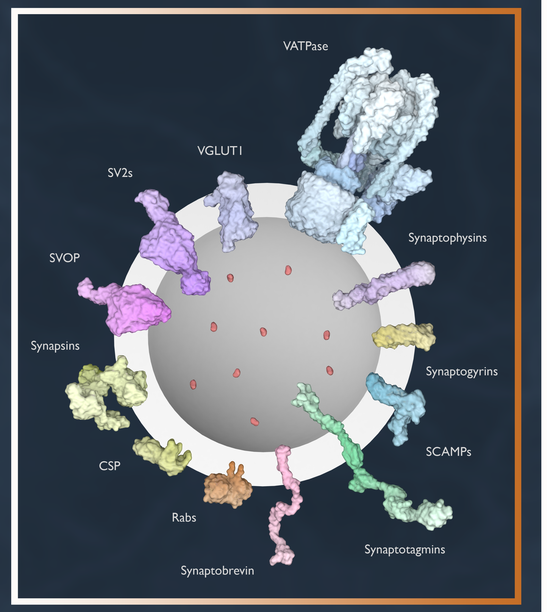
Function and Distribution of Synaptic Proteins



Plasma membrane

1. Synaptic vesicle loading

V-ATPase
VGlut
Synaptophysins
SV2s
Synaptogyrins
SCAMPs
SVOP
Synapsins
Synaptotagmins
CSP
Rabs
Synaptobrevin

7. Endosome fusion

Early endosome
Rabankyrin
EEA1
VPS34
Rab5
Pra1
Syntaxin 16
SNAP 23
Synaptobrevin I
VPS45
Rabenosyn
Rabex
Rabaptin

Triskelion
Auxilin
HSC70
6. Uncoating
AP2
Syi
MyoVI

K+
Glu-
EAAT
Glu-
H+
3 NA+
Cytoplamic glutamate pool
Glu-
Glutaminase
Gln

Active zone

5. Clathrin mediated endocytosis

Bassoon
3. Priming
Piccolo
ERK1
2. Docking
4.Vesicle fusion
AP180
Amphiphysin
EPS15
EPN
Synaptojanin
DAB2
Endophilin
Stonin2
ITSN
Clathrin Cage
CAPS
Rab3
RIM
Synaptotagmin
Liprin-α
Synaptobrevin
Munc13
αSNAP
NSF
Munc18
Rabphilin
Cpx
Arf6
α-catenin
Mint1
CASK
Syntaxin1a
AP2
Mals
SNAP25
Cav
PIPKIgamma
Dynamin
Myo1E
Neurexins
Ephrin B
N cadherin
Neurologin
K+ channels
KARs
NMDARs
SynCAMs
mGluR
other CAMs
Rap
Ras
Stargazin
Eph receptor
ß-catenin
Src
SPAR
TIAM1
RasGRF
PSD95s
GRIP
PICK
Homer
α-catenin
SAPAPs
nNOS
Cdc42
IRSp53
Shank
AKAP150
GRASP
Dynamin3
AMPARs
Shank
PKA
SAPAPs
Shank
Densin180
α-actinin
PLC
Kalirin7
PKC
Cortactin
Abp1
PLC
ß-PIX
Rac1
CAMKII
Cortactin
Actin filament
SynGAP
Rac1
α-fodrin

Postsynaptic density

Clathrin mediated endocytosis
Arf6
AMPARs
AP2
Clathrin coat

Antibodies for the Neuroscientist and Cellbiologist

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Presynaptic side

Postsynaptic side

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