

Protein synthesis at the synapse: Developmental changes, subcellular localization and regional distribution of polypeptides synthesized in isolated dendritic fragments

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This study evaluated local protein synthesis in subcellular fractions of pinched-off dendrites (synaptodendrosomes) from different brain regions and at different developmental ages.

Synaptodendrosomes were labeled with [³⁵S]methionine and newly synthesized proteins were characterized by SDS-PAGE and phosphorimaging. The same set of approximately 30 cycloheximide-sensitive labeled bands was observed in synaptodendrosomes isolated from different brain regions, although the relative enrichment of some individual bands varied. Labeling of several major proteins was developmentally regulated, revealing three different patterns of variation.

Subcellular fraction studies revealed that at least 10 labeled bands were enriched in synaptic junctions. © 2001 Elsevier Science B.V. All rights reserved.