Leica Laser Microdissection Application Note

Protein Analysis by Western Blotting
Protein Extraction and Western Blotting from Rat Brain

Procedure:
Flash frozen rat brain was cut into 20 µm sections followed by immunostaining with an antibody against Protein III. 10 consecutive tissue sections were used for laser microdissection to collect enough material for protein analysis.

Immunostaining for Protein III after microdissection. Protein III was assembled after electro stimulations (↔). Parts of hippocampus (↔) were collected using laser microdissection system.

Protein extract was applied on SDS-PAGE. The presence of Protein I, Protein II and Protein III was verified by Western Blotting. Distinct bands on the blot show that tissue sections preparation and laser microdissection procedures were gentle enough to protect these proteins from the degradation.

1 2 3 4 5 6 7 8

1-4 Lanes: SDS-PAGE Silver stain
5-8 Lanes: Western Blotting
1,5 Lanes: no stimulations SUP. Fractions
2,6 Lanes: electro stimulations SUP. Fractions
3,7 Lanes: no stimulations PPT. Fractions
4,8 Lanes: electro stimulations PPT. Fractions

Acknowledgements: We would like to thank Dr. Arigo Fukazawa from Mitsubishi Bio Science Research Center, Japan for providing images and results.