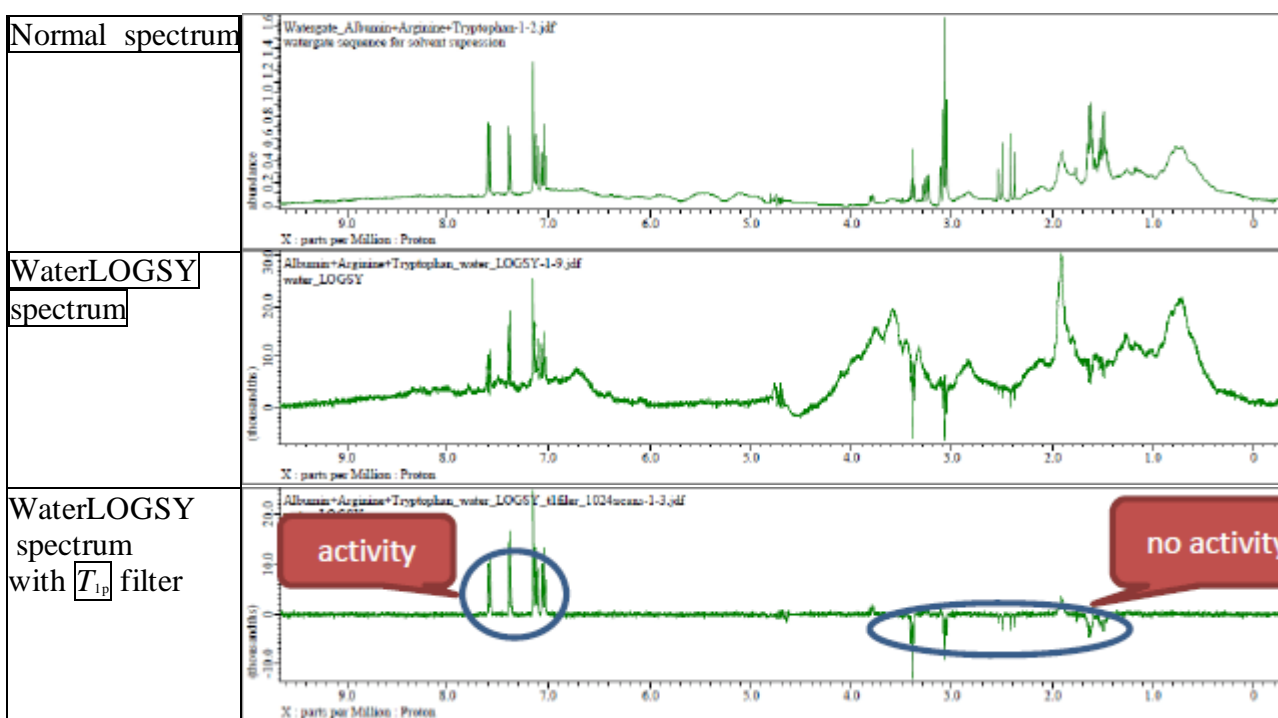


Protein-Ligand Interaction II: WaterLOGSY experiments

NM130008E

WaterLOGSY (Water-Ligand Observed via Gradient Spectroscopy) is one of several powerful methods used to screen compounds interacting with proteins. The mechanism of this experiment is to detect NOE from the bulk water signal to the compound of interest.

There are several magnetization transfer pathways that can be considered. The primary pathway from bulk water to the target compounds depends on the protein-ligand interaction that leads to a positive or negative NOE. Compounds with protein affinity can easily be identified because of this effect. Recently we demonstrated WaterLOGSY experiments on a JNM-ECS 400 MHz system. In this experiment, the resonances from compounds with binding appear with positive signals, whereas non-binding compounds appear with negative signals.



Sample: albumin, L-(+)-arginine and L-tryptophan

Reference

- 1). Dalvit, C., Pevarello, P., Tato, M., Veronesi, M., Vulpetti, A., Sunstrom, M., *J. Biomol. NMR.* **2001**, *21*, 349-359