SERVICIO DE QUÍMICA DE PROTEÍNAS

Isothermal Titration Calorimetry (ITC) is a technique that provides a complete thermodynamic profile of a wide variety of molecular interactions in solution.

- ITC measures the heat absorbed or generated when molecules interact.
- Measuring heat transfer during binding enables accurate determination of binding constants (Kd), reaction stoichiometry (n) and enthalpy (ΔH) in a single experiment. From these data, Gibb's free energy (ΔG) and entropy (ΔS) can be calculated.
- Thermodynamic measurements also provide insight into the nature of the non-covalent forces responsible of the mechanisms underlying molecular interactions.
- It has the advantage of not requiring modification of binding partners, either with fluorescent tags or through immobilization, ITC measures the affinity of binding partners in their native states.