$$\Delta G^0_{assoc} = \Delta G^0_{interaction} + \Delta G^0_{rot,trans}. \qquad (4)$$

Equation 4 results in the functional form of the equation we used to calculate the association energy:

$$\Delta G^0_{assoc} = \alpha \Delta G^0_{apolar} + \beta \Delta G^0_{polar} + \Delta G^0_{rot,trans}. \qquad (7)$$

The coefficients α and β are dimensionless quantities used to scale the solvation energies to the observed dissociation constants. The values of α, β, and $\Delta G^0_{rot,trans}$ from Equation 7 were fit using a recursive least-squares procedure from the data in Table 2.