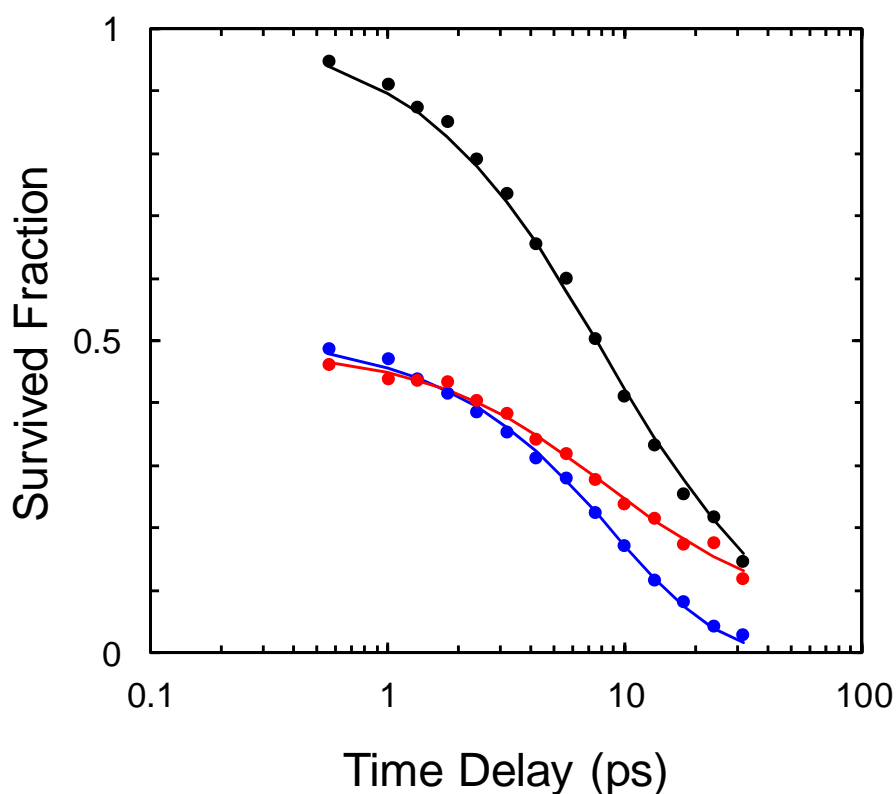


## Supporting Information

### Direct Observation of Ligand Rebinding Pathways in Hemoglobin Using Femtosecond Mid-IR Spectroscopy

*Seongheun Kim, Jaeheung Park, Taegon Lee, and Manho Lim\**

Department of Chemistry and Chemistry Institute for Functional Materials, Pusan National University,  
Busan 609-735, Korea



**Figure S1.** Kinetics of geminate rebinding of NO after photodeligation of HbNO in D<sub>2</sub>O at 283K (black circles). Kinetics of spectral components are also shown; blue circles are for  $A_{G1}$  band and red circles for  $A_{G2}$  band. The solid lines are the fits to exponential functions;  $0.51 \exp(-t/9 \text{ ps})$  for  $A_{G1}$  band and  $0.27 \exp(-t/7 \text{ ps}) + 0.22 \exp(-t/29 \text{ ps})$  for  $A_{G2}$  band. As discussed in the result section, the kinetics parameters could be very sensitive to the background subtraction. Therefore, we could not add any physical significance to the fitted kinetics parameters.