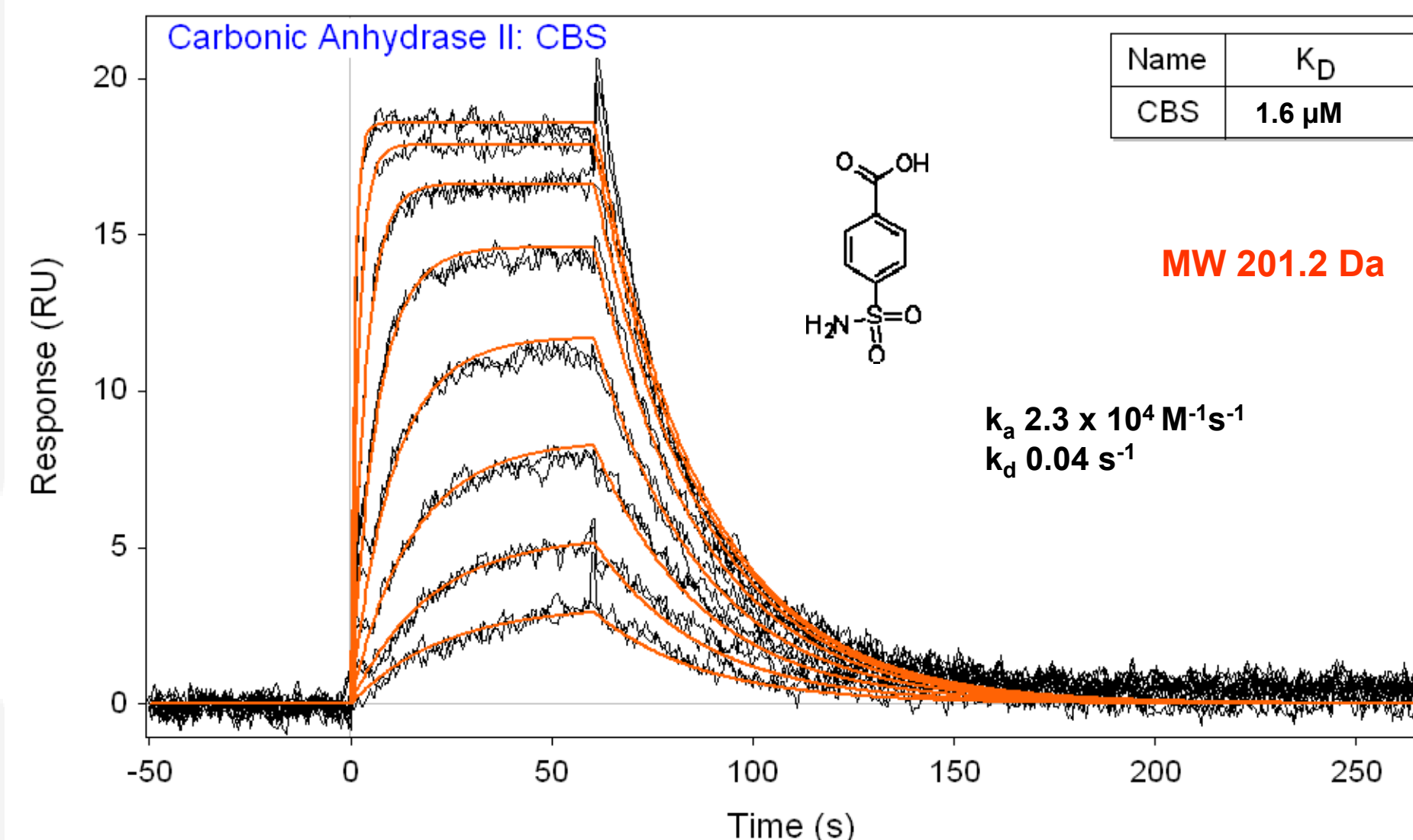
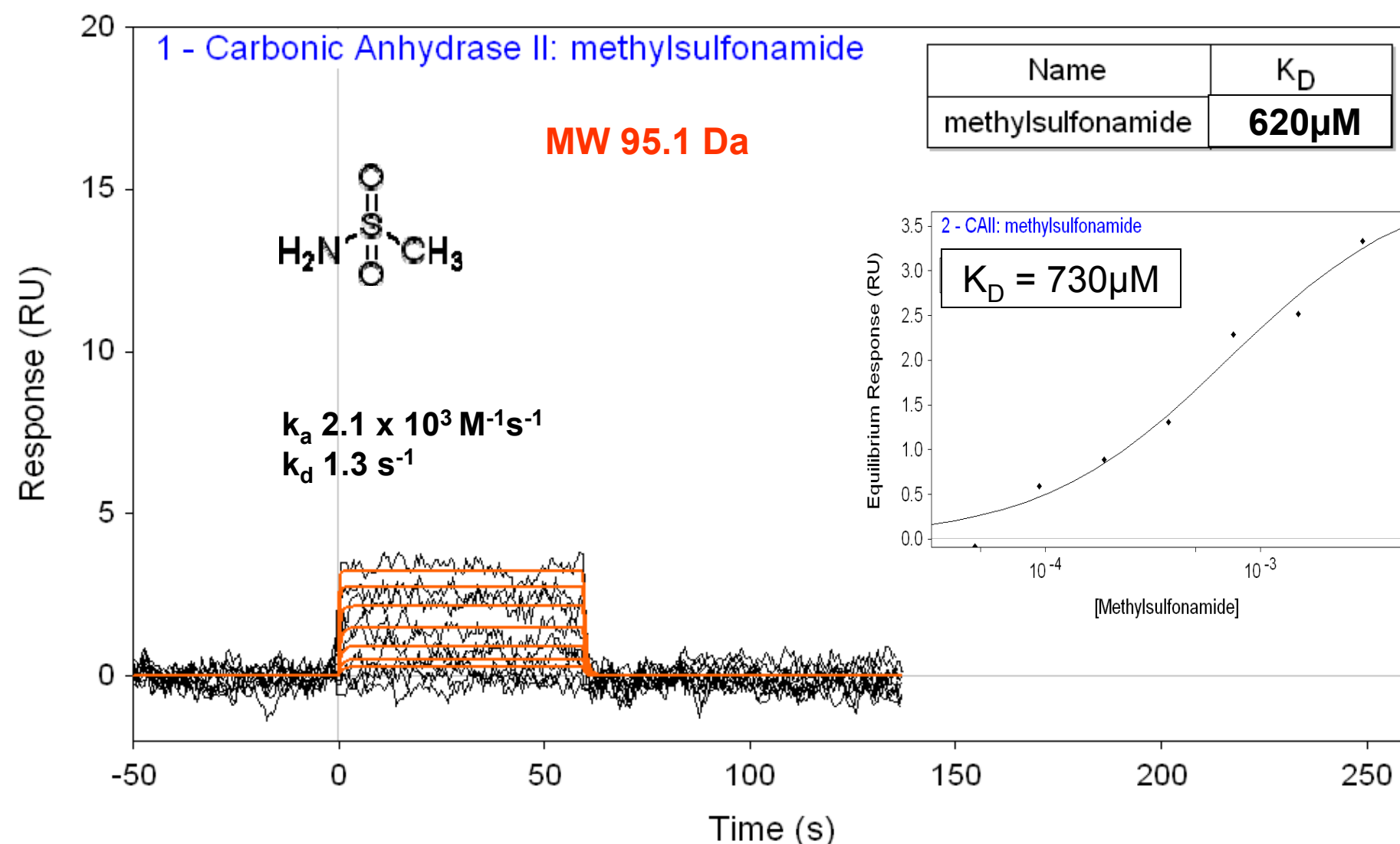


High Quality Kinetic Analysis by Global fitting of the 1:1 Binding Interaction Model to SensiQ Pioneer Data Sets

Aaron Martin, Jeffery Havard, Nathan Gillock, John Quinn
 ICx Nomadics Inc, 800 Research Parkway, Suite 100, Oklahoma City, OK 73104
 www.discoverensiq.com

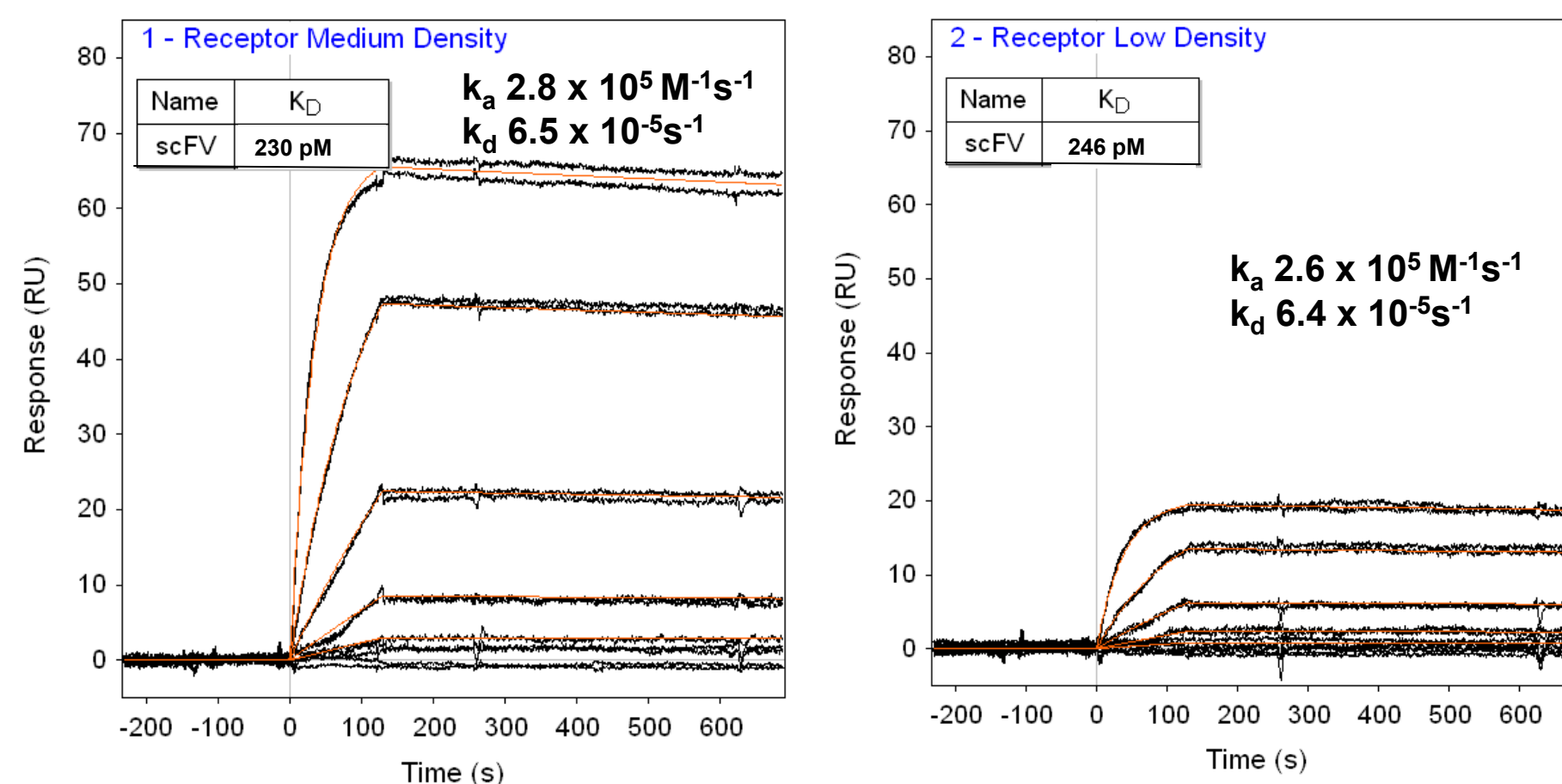


Molecular Weight Cutoff

Methylsulfonamide is a 95Da inhibitor for the enzyme Carbonic Anhydrase II. The above plot shows the kinetic interaction curves scaled for comparison to the CBS data on the right. The K_D from the kinetic analysis was 620 μM and is in good agreement with the K_D from the steady state model fit (inset plot), 730 μM . In this experiment only 3000RU of CAII was immobilized onto a COOH5 sensing chip. Since the COOH5 capacity exceeds 20,000RU it is reasonable to conclude that the effective molecular weight cut-off is far lower than 95Da. **Data was recorded in collaboration with Dr. David Myszka of Biosensor Tools LLC, Salt Lake City, Utah**

High Data Quality for Low Molecular Weight Analyte

The overlaid binding response curves for the interaction of CBS with immobilized Carbonic Anhydrase II are shown. The global model fit is almost perfectly superimposable upon the CBS dilution series run in duplicate. The duplicates are also superimposable. The baseline is well behaved before and after the injection but is also stable during the steady state binding region of each curve.



Negligible Mass Transport Limitation

Two sets of binding interaction curves are shown for the interaction of a scFv (MW 27KDa) with an affinity captured receptor. Each sample dilution was run in duplicate and the model was fitted using Qdat. Channel 1 was coated with a medium density of receptor, channel 2 with a low density and channel 3 remained uncoated and was used in double referencing. The kinetic constants from independent global fitting of the simple 1:1 model yielded almost identical kinetic constants thereby establishing the absence of mass transport limitation for this high affinity interaction. **Data was recorded in collaboration with Dr. David Myszka of Biosensor Tools LLC, Salt Lake City, Utah**