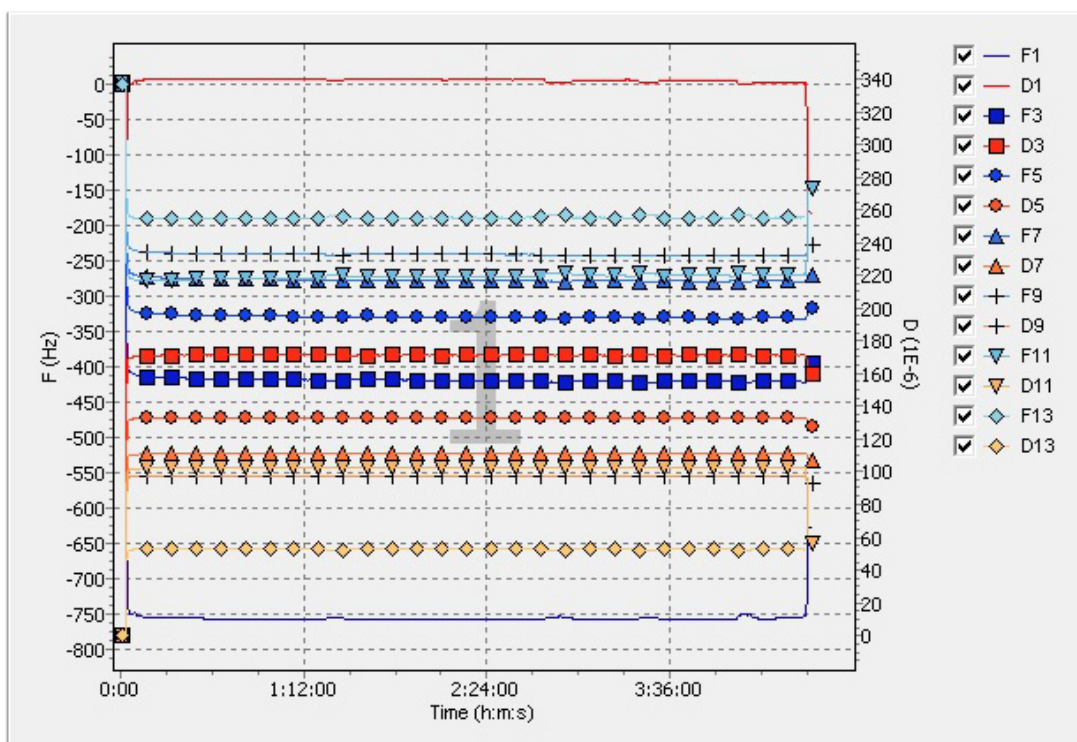
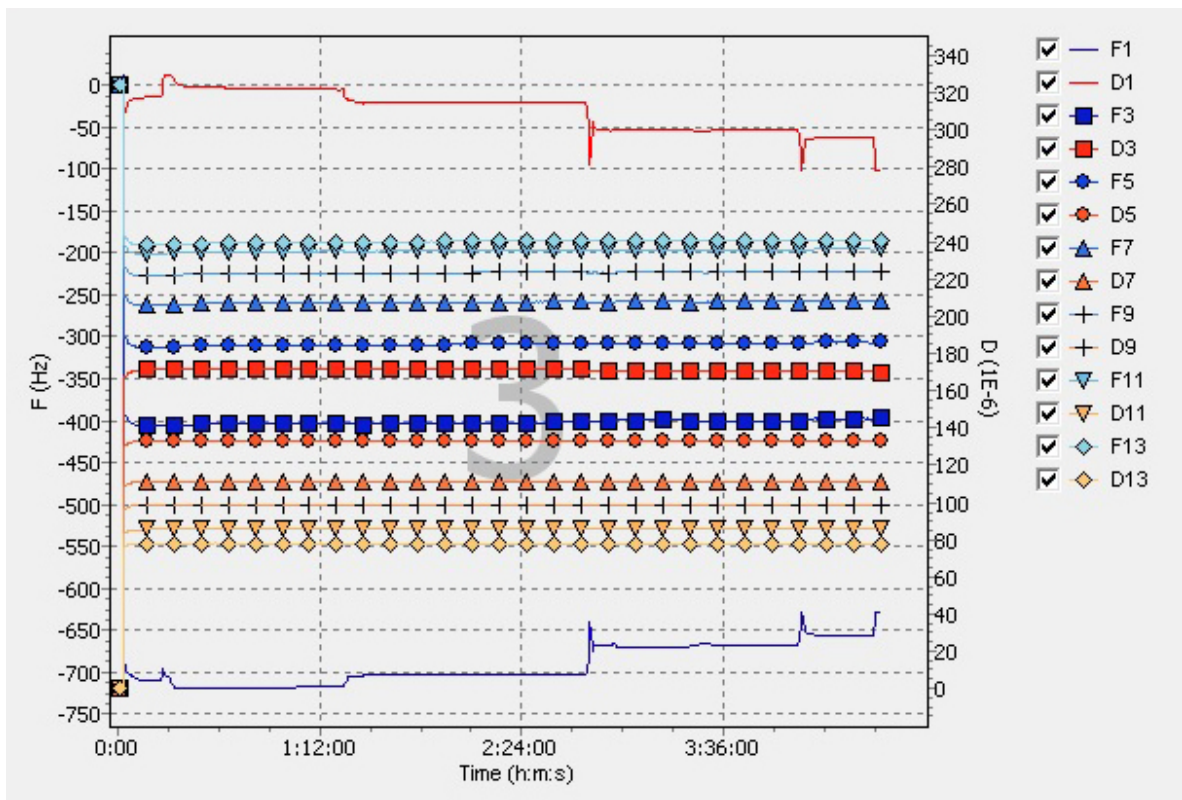
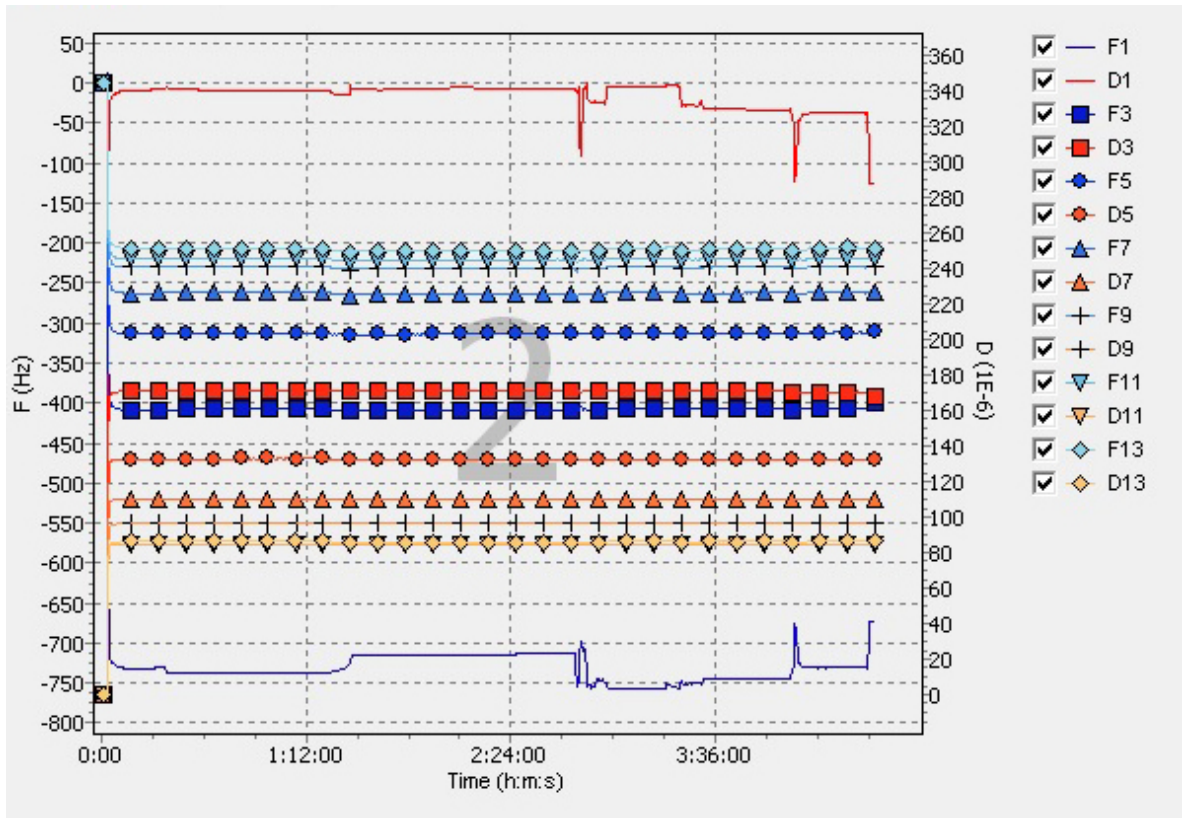


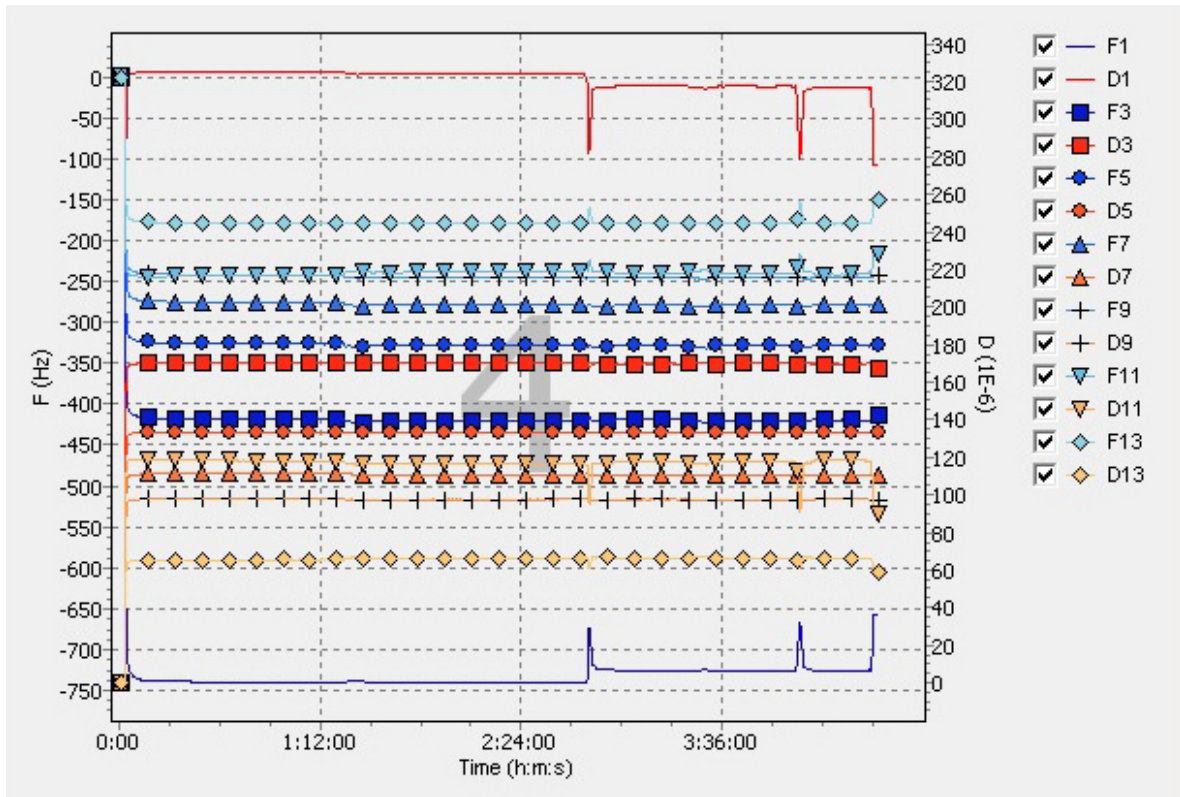
Supplementary Information

VPP peptide standardization:

Each image represents one sensor. The 4 sensors were used as follows: MiliQ water was injected in the first phase of the experiment, after the VPP peptide was injected at different concentrations: 1, 5 and 50 micromolar. MiliQ water was added for washing the sensors and VPP peptide was injected using more concentrations: 0.5, 2 and 3 microlar. Frequency is represented by the blue line and dissipation is represented by the red line.







SOD and CAT genes interaction with VPP peptide

The 4 sensors of the QCM-D were used as follows:

Sensor 1- control

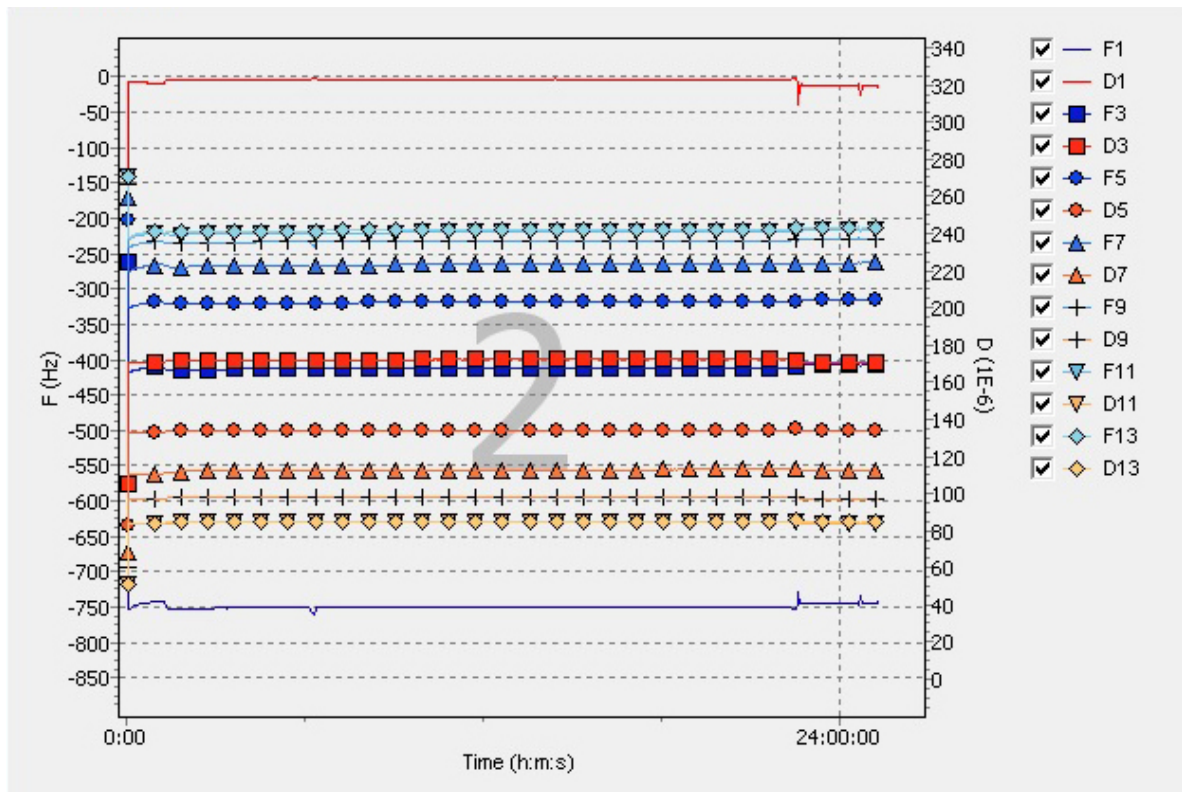
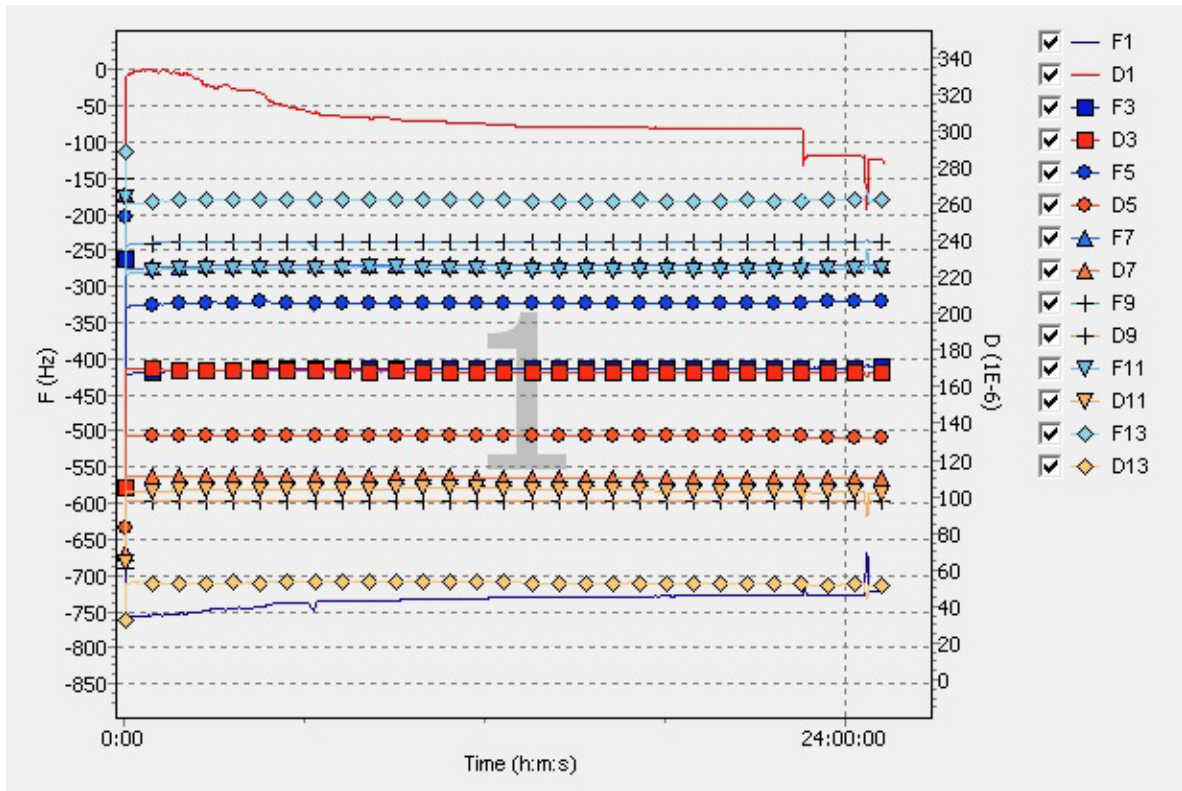
Sensor 2- SOD gene at 3.5ng/microliter

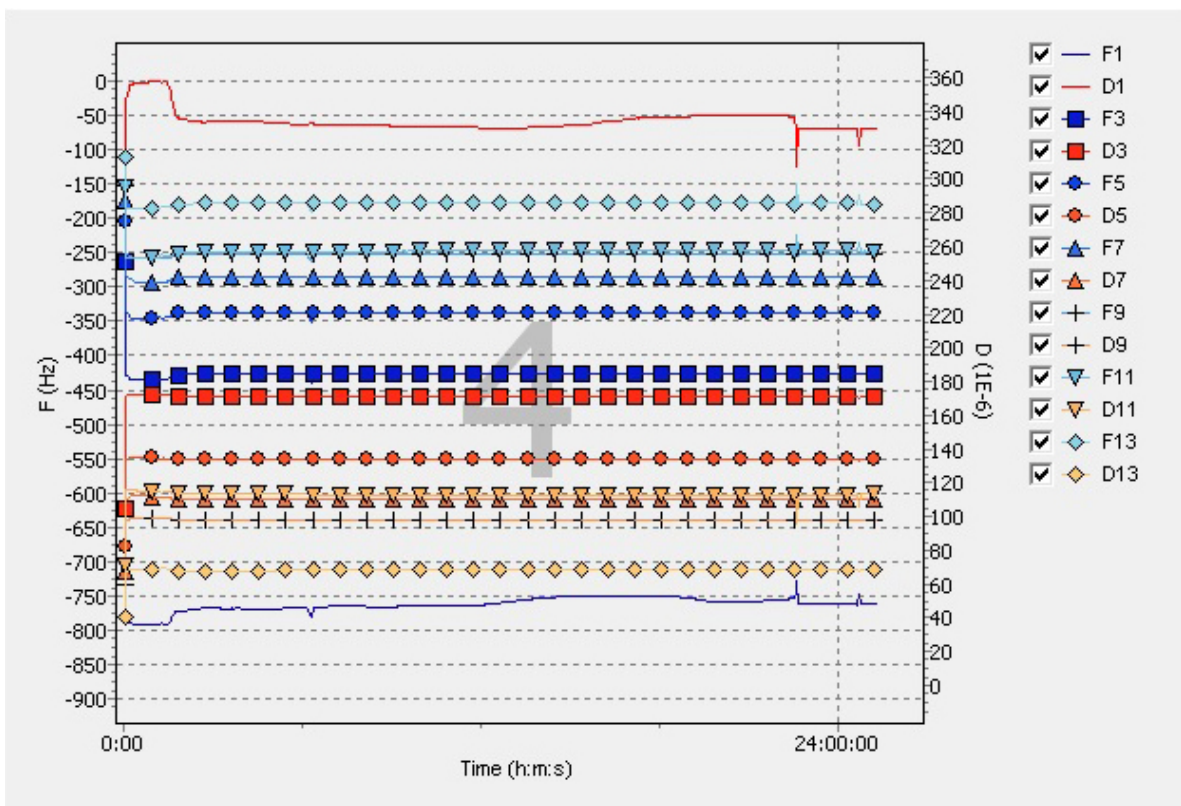
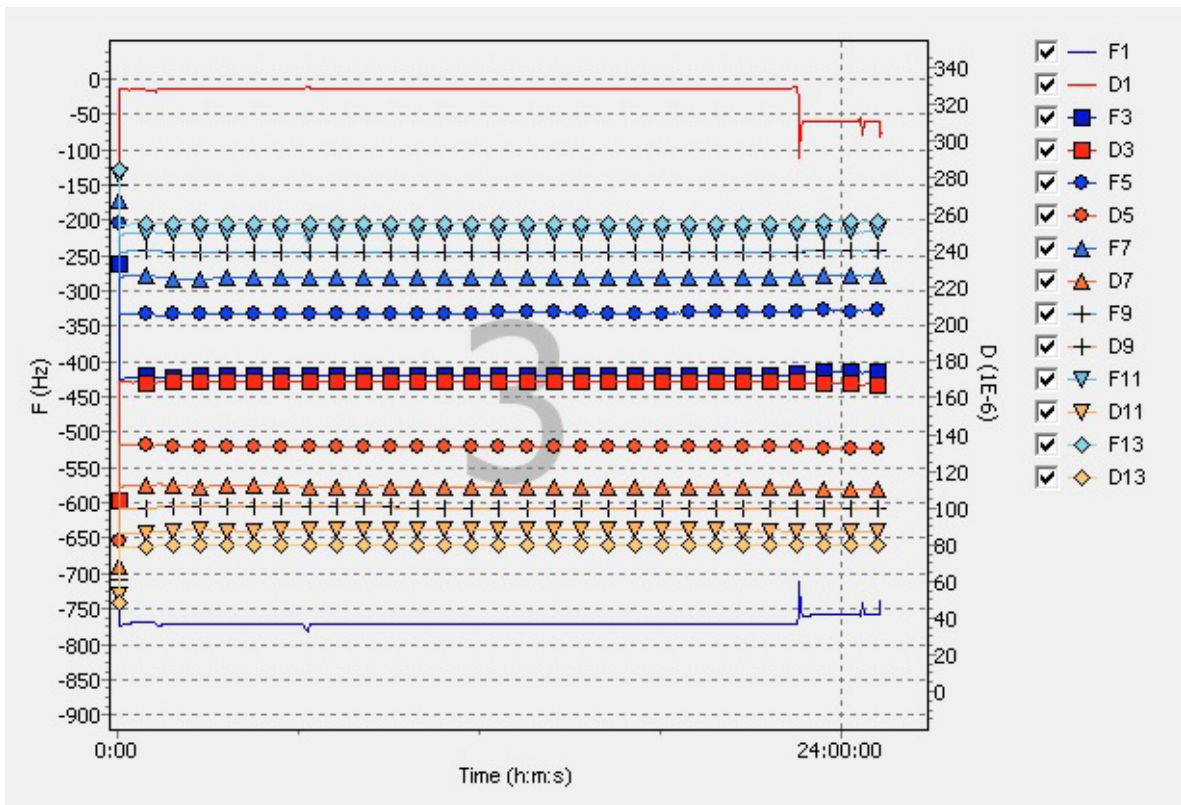
Sensor 3- CAT gene at 3.5ng/microliter

Sensor 4- CAT gene at 3.5ng/microliter

The experiment was done as follows: MiliQ water was injected, after the corresponding genes was injected to each sensor, finally the VPP peptide at a concentration of 1 micromolar was injected for the interaction.

Frequency is represented by the blue line and dissipation is represented by the red line.





SOD and CAT genes interaction with VPP peptide

The 4 sensors of the QCM-D were used as follows:

Sensor 1- control

Sensor 2- CAT gene at 3.5ng/microliter

Sensor 3- CAT gene at 3.5ng/microliter

Sensor 4- SOD gene at 3.5ng/microliter

The experiment was done as follows: MiliQ water was injected for 2 hours, after the corresponding genes were injected to each sensor for 19 hours, then MiliQ water was injected for 1 hour, then the VPP peptide at a concentration of 1 micromolar was injected for 2 hours, after MiliQ water was injected for 10 minutes.

Frequency is represented by the blue line and dissipation is represented by the red line.

