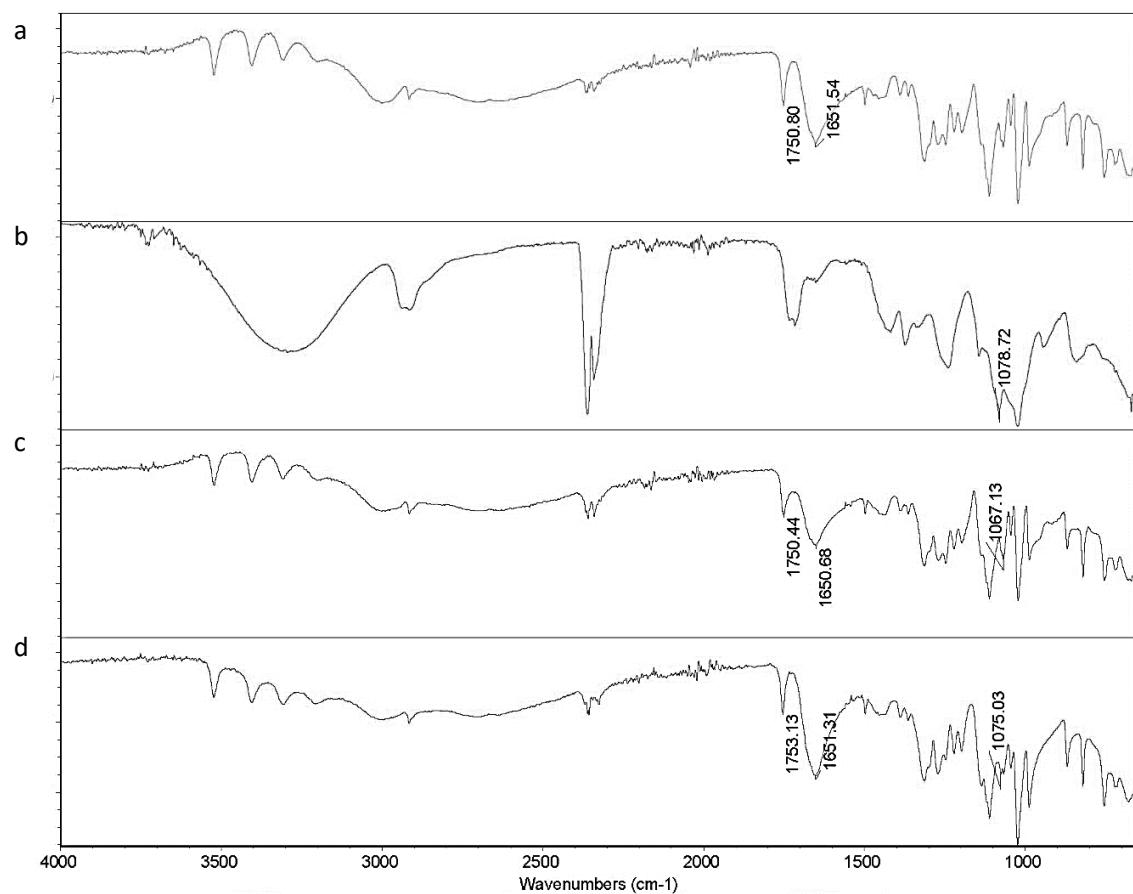
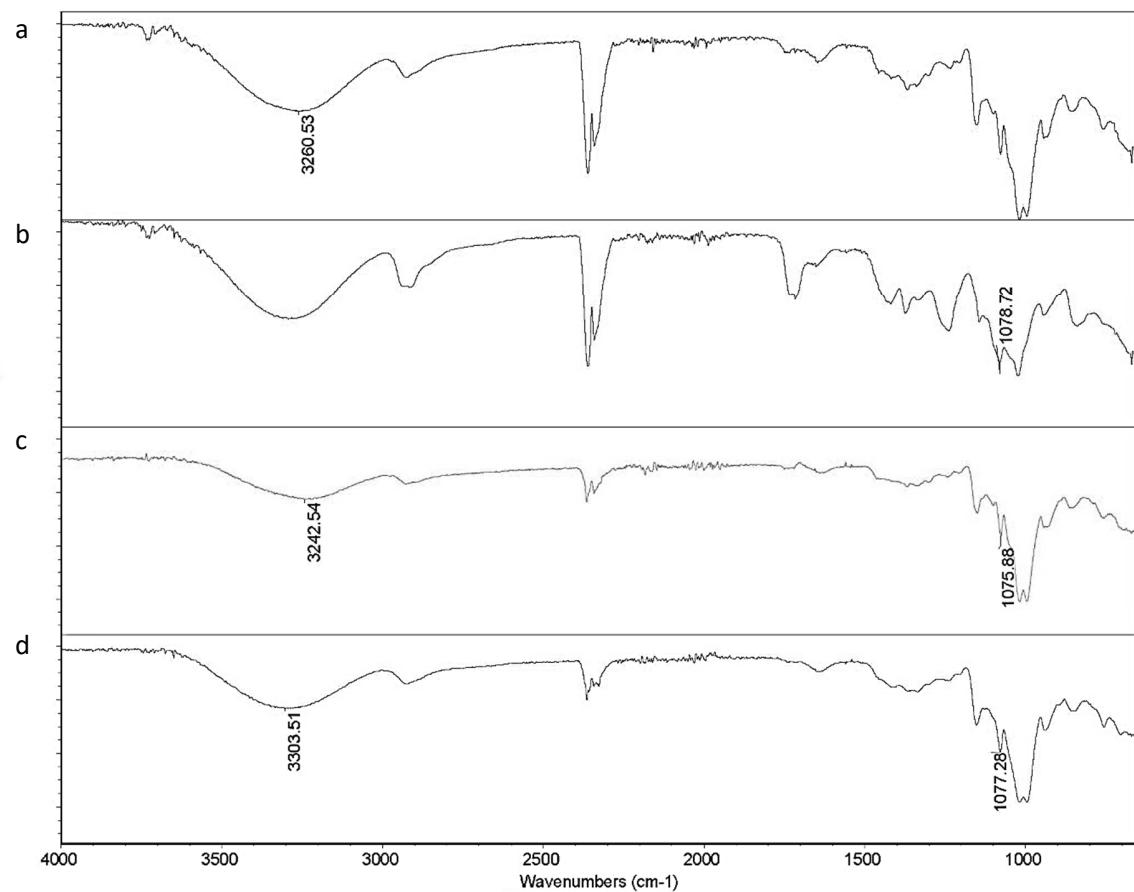


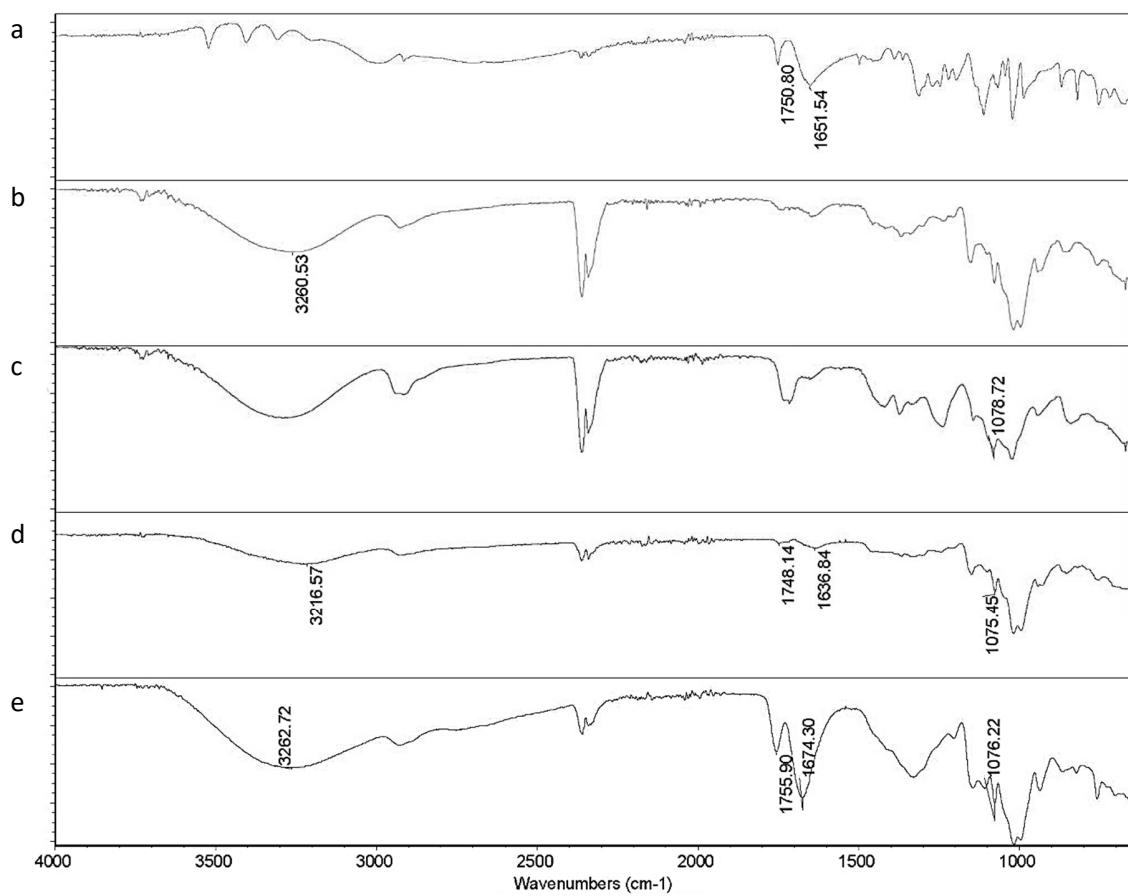
**Figure S1** ATR-FTIR spectra of (a) ascorbic acid, (b)  $\gamma$ CD, (c) physical mixture of ascorbic acid and  $\gamma$ CD and (d) ascorbic acid/ $\gamma$ CD complexes.



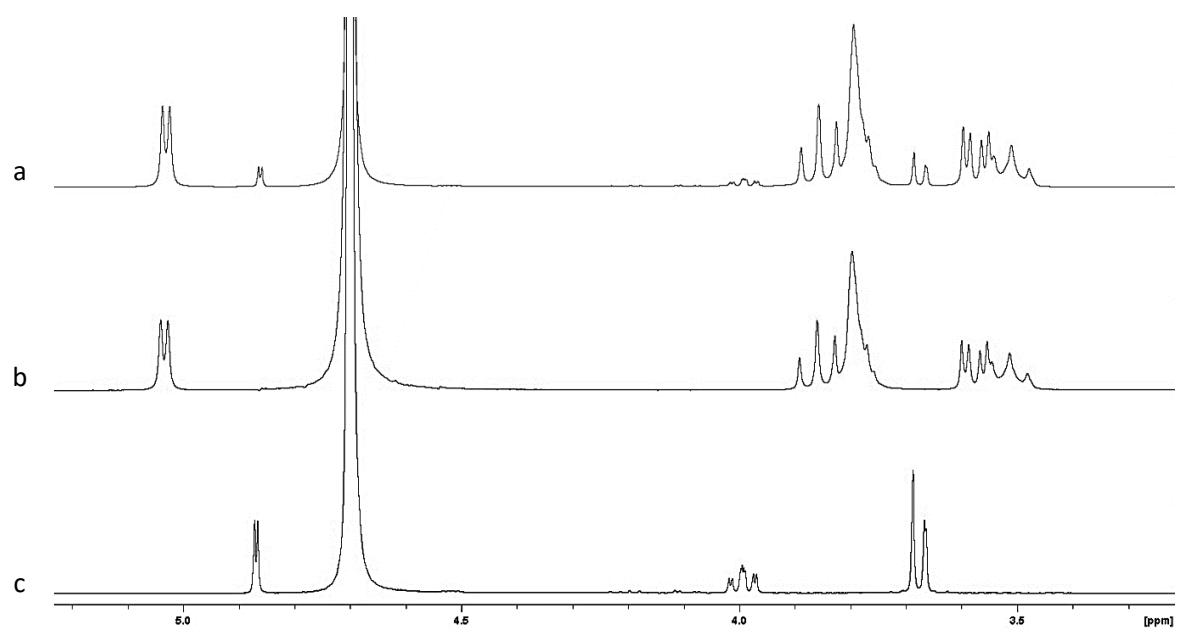
**Figure S2** ATR-FTIR spectra of (a) ascorbic acid, (b) PVA, (c) physical mixture of ascorbic acid and PVA and (d) ascorbic acid/PVA complexes.



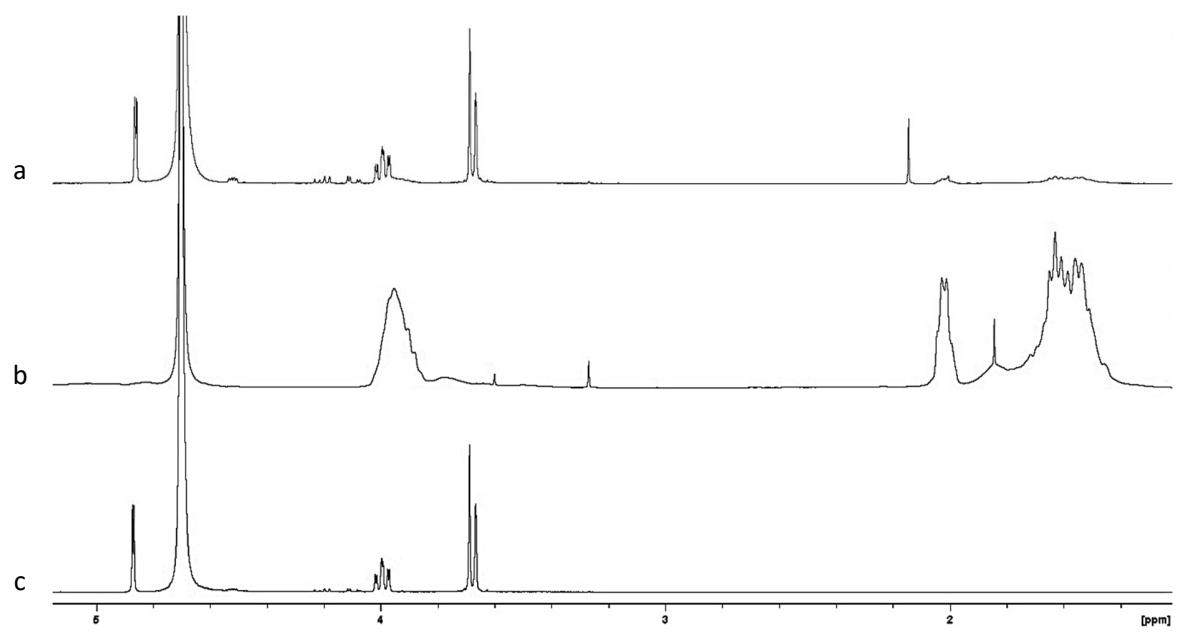
**Figure S3** ATR-FTIR spectra of (a)  $\gamma$ CD, (b) PVA, (c) physical mixture of  $\gamma$ CD and PVA and (d)  $\gamma$ CD/PVA complexes.



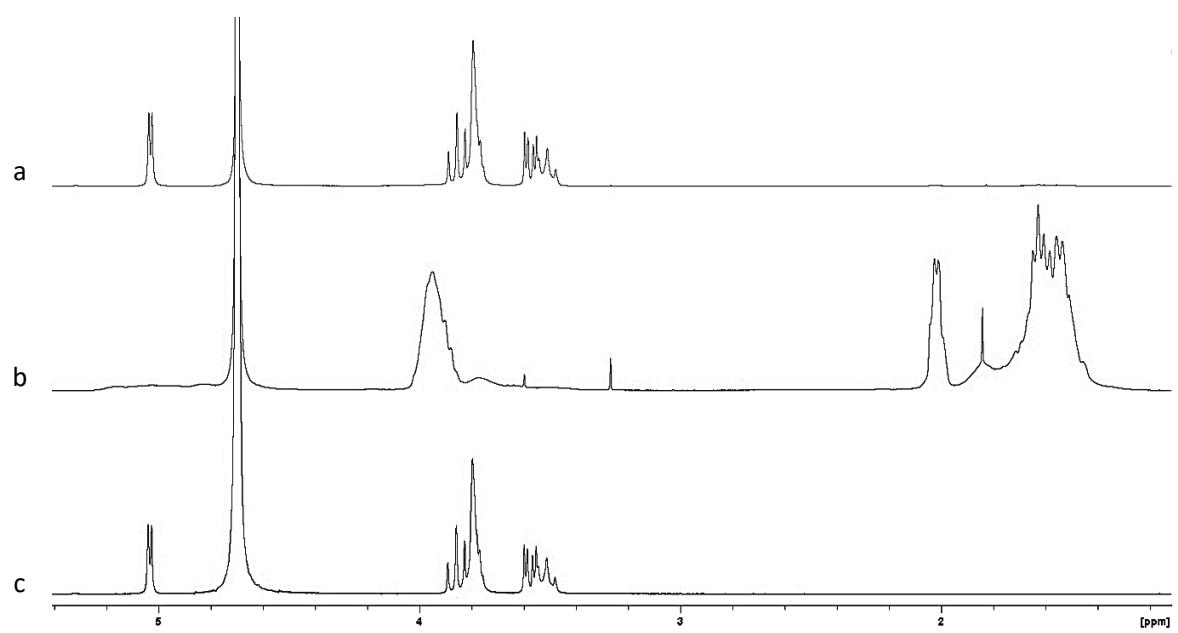
**Figure S4** ATR-FTIR spectra of (a) ascorbic acid, (b)  $\gamma$ CD, (c) PVA, (d) physical mixture of ascorbic acid,  $\gamma$ CD and PVA and (e) ascorbic acid/ $\gamma$ CD/PVA complexes.



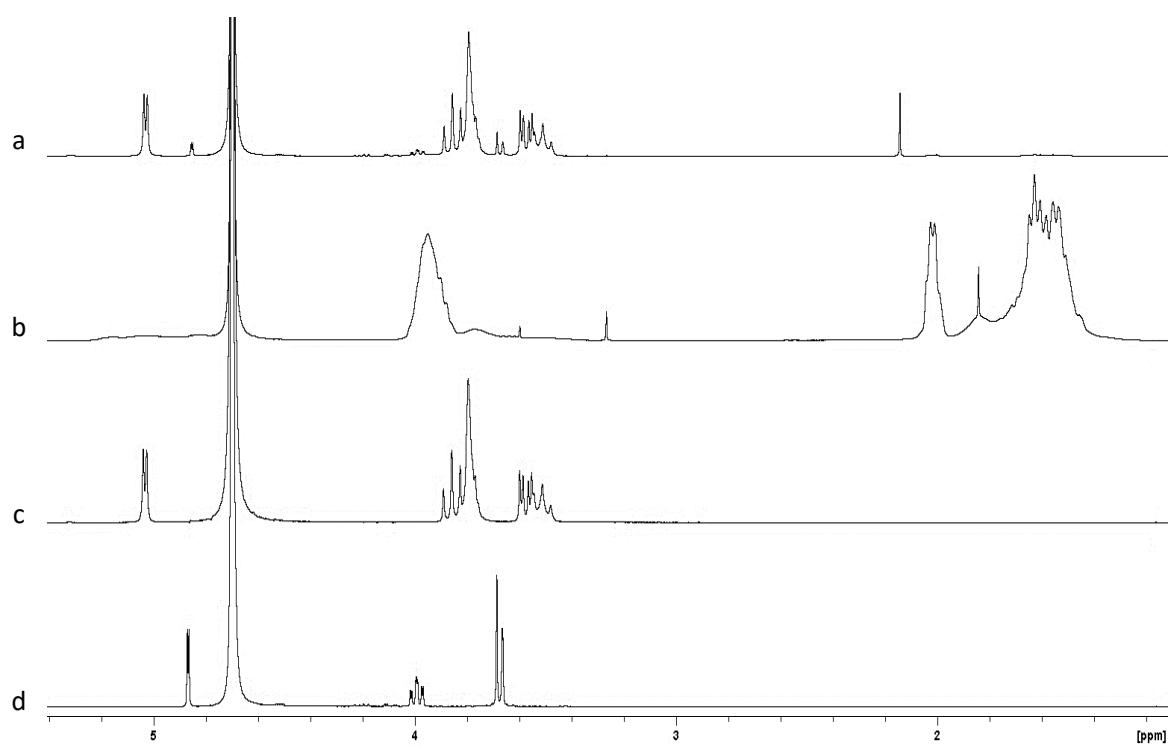
**Figure S5** <sup>1</sup>H NMR spectra of (a) ascorbic acid, (b)  $\gamma$ CD and (c) ascorbic acid/ $\gamma$ CD inclusion complexes in D<sub>2</sub>O.



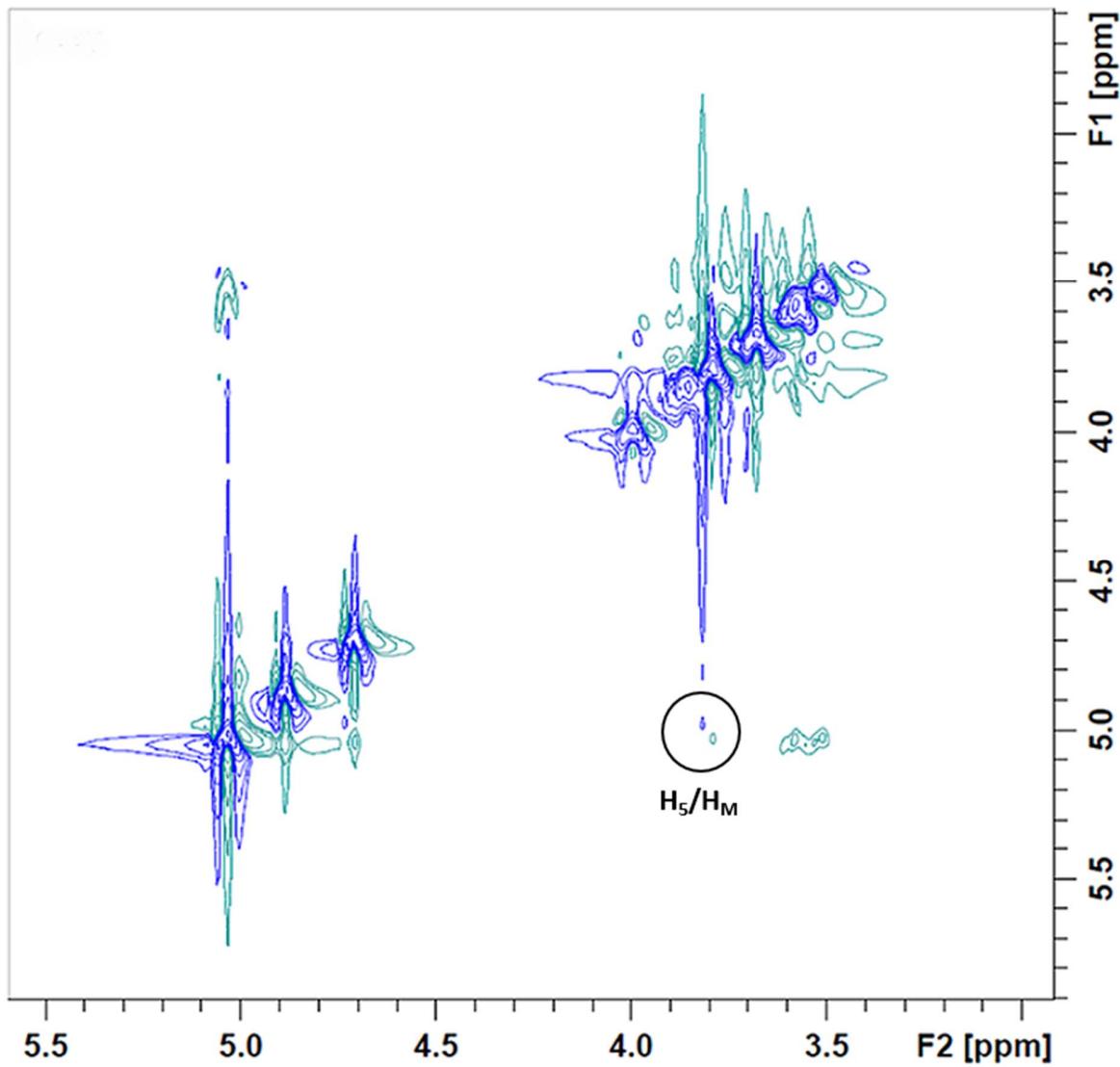
**Figure S6** <sup>1</sup>H NMR spectra of (a) ascorbic acid, (b) PVA and (c) ascorbic acid/PVA inclusion complexes in D<sub>2</sub>O.



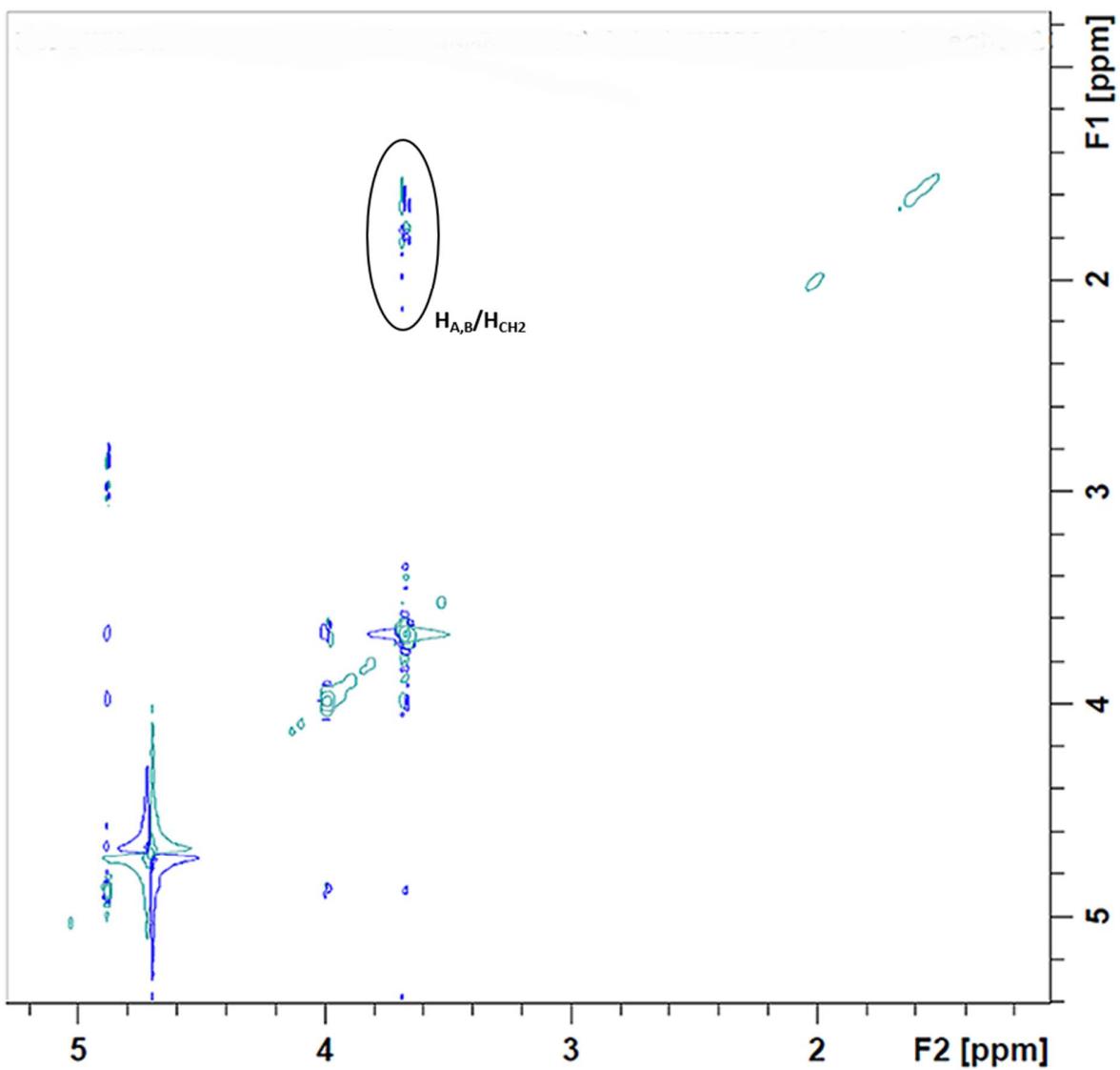
**Figure S7** <sup>1</sup>H NMR spectra of (a)  $\gamma$ CD, (b) PVA and (c)  $\gamma$ CD/PVA inclusion complexes in D<sub>2</sub>O.



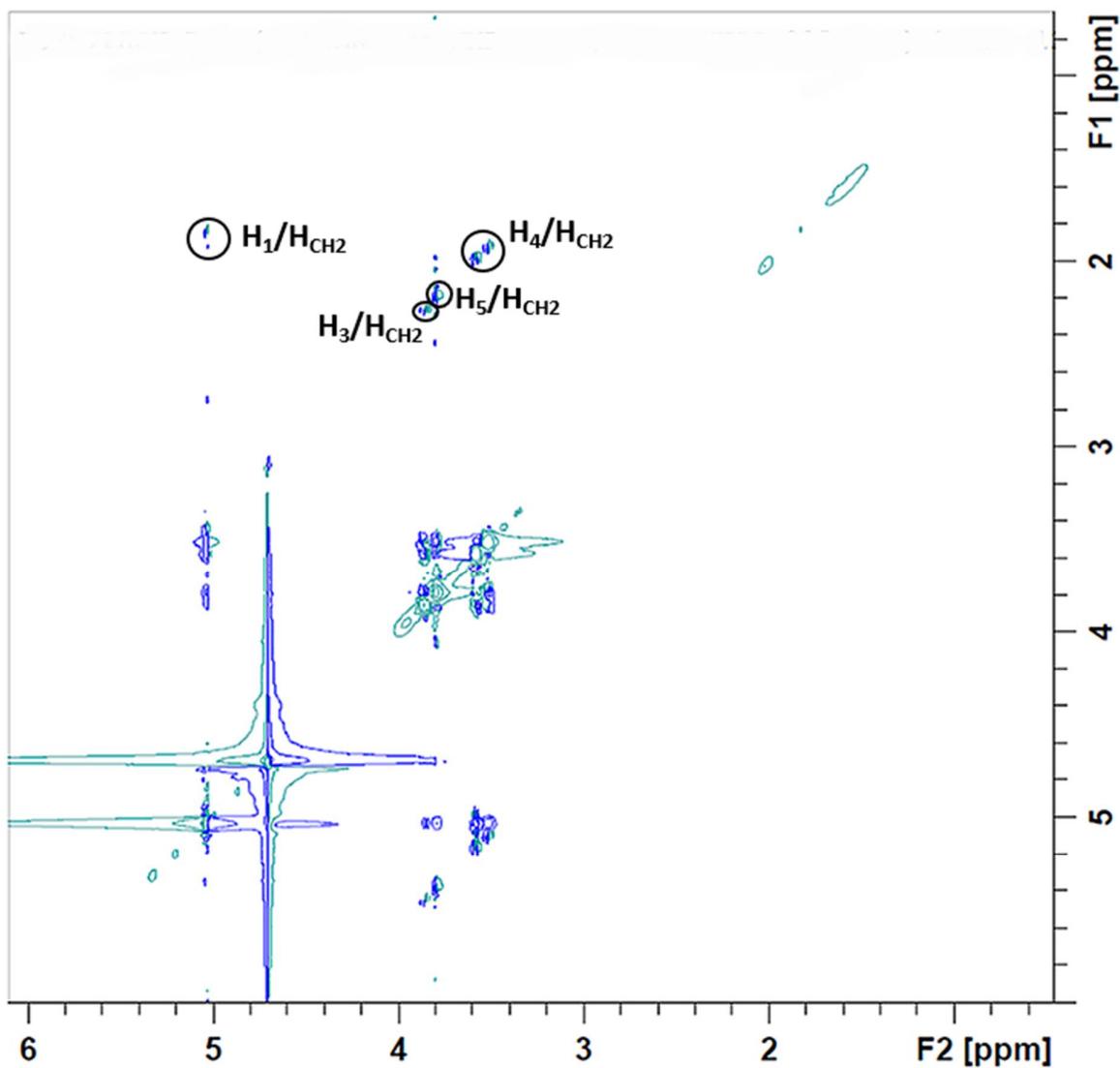
**Figure S8** <sup>1</sup>H NMR spectra of (a) ascorbic acid, (b)  $\gamma$ CD (c) PVA and (d) ascorbic acid/ $\gamma$ CD/PVA complexes in D<sub>2</sub>O.



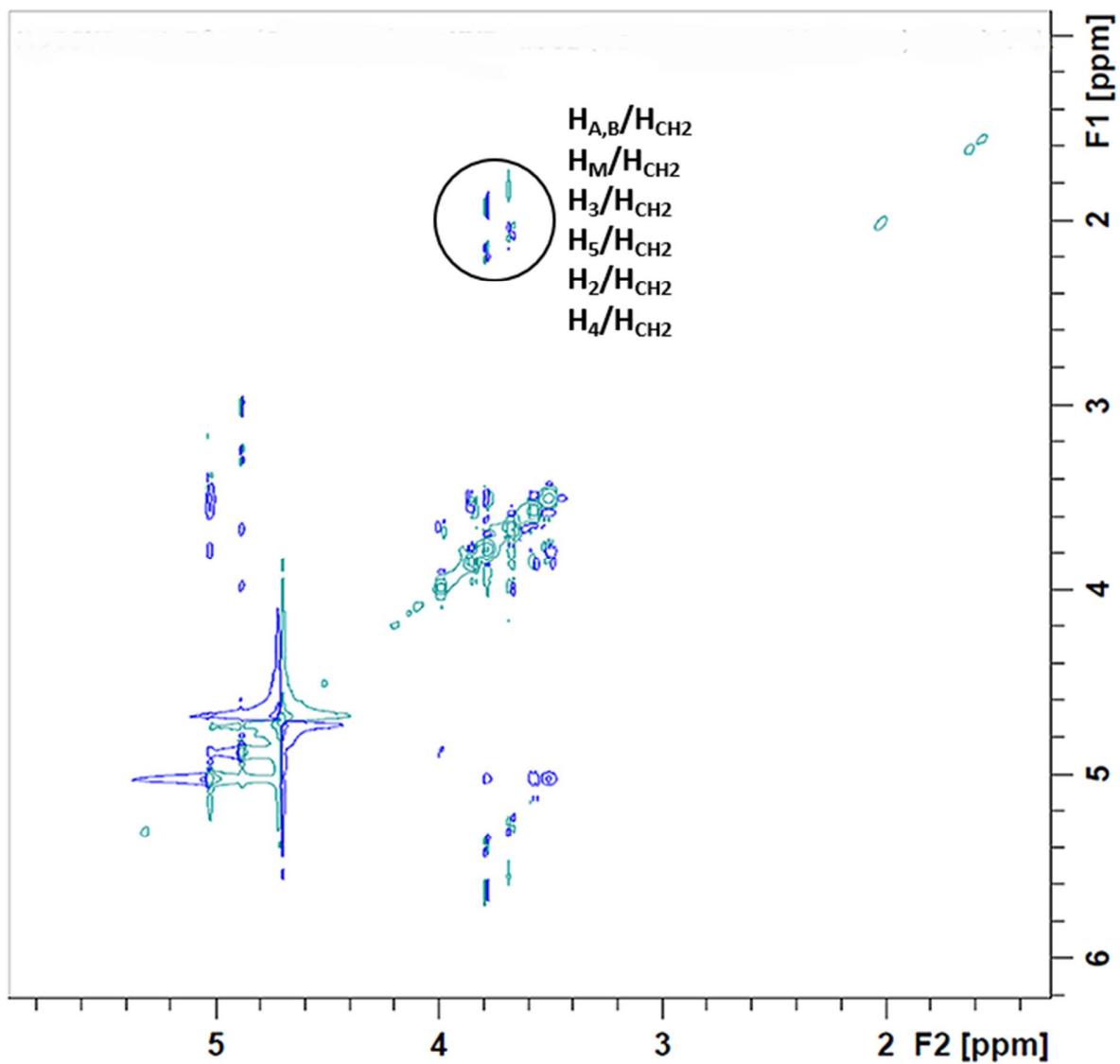
**Figure S9** Rotating overhauser effect spectroscopy (ROESY) pattern of ascorbic acid/ $\gamma$ CD complexes.



**Figure S10** Rotating overhauser effect spectroscopy (ROSEYROESY) pattern of ascorbic acid/PVA complexes.



**Figure S11** Rotating overhauser effect spectroscopy (ROSEYROESY) pattern of  $\gamma$ CD/PVA complexes.



**Figure S12** Rotating overhauser effect spectroscopy (ROESY) pattern of ascorbic acid/ $\gamma$ CD/PVA ternary complexes.