Electronic Supplementary Material (ESI) for Molecular BioSystems. This journal is © The Royal Society of Chemistry 2015

```
10
                                           70
       20
              30
                     40
                            50
                                    60
LPTSFDPRDGSKWPACKDSLNHVRDQGSCGSCWAFGAAEAMTDRICIASNGQNNFYLSAEDLTSCCDSCG
MGCEGGYPSAAWDYFQSTGLVTGGDWNSNQGCYPYQLQACDHHVTGKYQPCGDIQPTPACANSCQNNATW
SSDKHFGASSYSVGTDQQSIMTEIYTNGPVEASYDVYADFVSYKSGVYQHVTGDYLGGHAVKIIGWGVDG
ccccccceeeeccchhhhhhhhhttcceeeeeeehhhhheeccceeeeccccccceeeeeccct
STPYWIVANSWNNDWGNNGFFNILRGSDECGIEDGIVAGIPKVSSKKH
tcceeeeccccttttttteeeeeccccttcchheeetccccccc
Sequence length:
               258
SOPMA:
  Alpha helix
               (Hh) :
                       47 is
                            18.22%
  Extended strand (Ee):
                       45 is
                            17.44%
               (Tt) :
  Beta turn
                       25 is
                             9.69%
                            54.65%
  Random coil
               (Cc) :
                      141 is
```

Fig. S1. Secondary structure prediction of the Cathepsin B from *Hordeum vulgare* sequence by SOPMA.

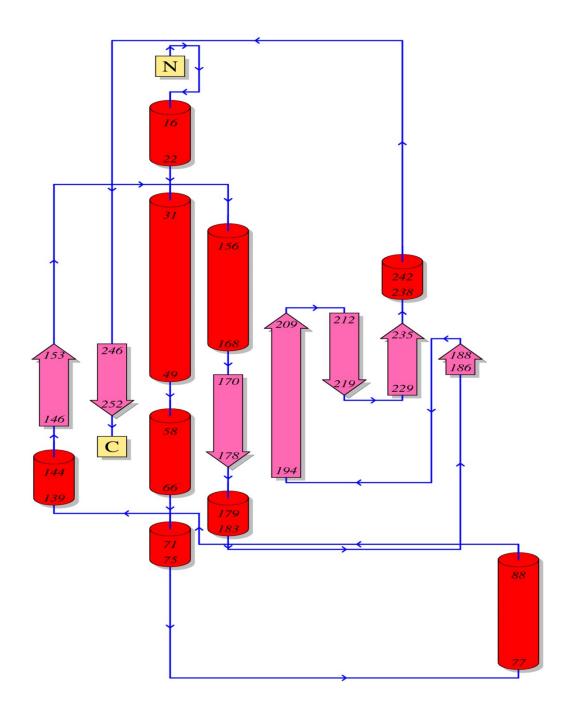


Fig. S 2. The topology of cathepsin B from *Hordeum vulgare* structure given by PDBsum.

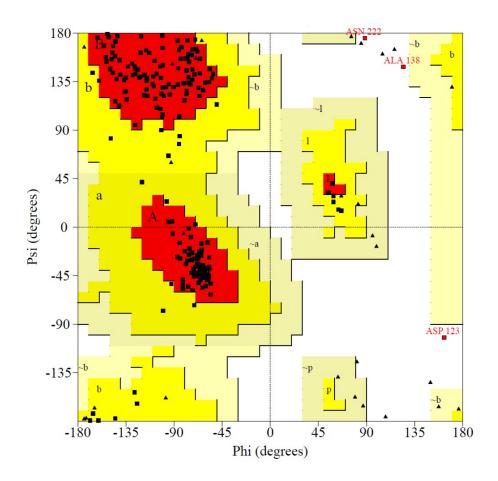


Fig. S 3. Ramchandran plot analysis of Cathepsin B from *Hordeum vulgare*.