



**Figure S1.** Phylogeny analysis of *M. sativa* AINTEGUMENTA protein with other AP2/EREB transcription factors. The GenBank accession numbers are as follows: AP2 like *Phaseolus vulgaris* (ESW30355.1), AIL6 *Vigna angularis var. angularis* (BAT99446.1), AIL6 *Arachis ipaensis* (XP\_016201070.1), AIL like *Medicago truncatula* (XM\_003612982.1), AIL6 *Cicer arietinum* (XP\_004509770), AIL6 *Lupinus angustifolius* (XP\_019421574.1), AIL6 *Cucurbita moschata* (XP\_022942874), AIL6 *Gossypium raimondii* (KJB18166.1), AP2 like *Citrus clementina* (ESR39494.1), AIL6 *Nicotiana attenuate* (O1T03126.1) and AP2 like *Coffea canephora* (CDP01573.1).