

Additional file 2. List of AP2 domains used for the phylogenetic analysis of the *GmERF* genes. The soybean *GmERF* genes were obtained from SoyDB: A Knowledge Database of Soybean Transcription Factors (<http://casp.rnet.missouri.edu/soydb/>) and verified using the Soybean Transcription Factor Knowledge Base (http://www.igece.org/Soybean_TF/).

> Glyma20g16920.1 (GmERF1)

KRYRGVRRRPWGKFAAEIRDPTRKGTRVWLGTDFDSEIDAAKAYDCAAFKMRGQKAILNFPLEA

> Glyma20g16910.1 (GmERF2)

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> Glyma11g03900.1 (GmERF3)

KHYRGVRQRPWGKFAAEIRDPNKRKGSRVWLGTFTDAIEAAKAYDRAAFRLRGSKAILNFPLEA

> Glyma01g41530.1 (GmERF4)

EKKHYSATETLGKFAAEIRDPNKRKGSRVWLGTFTDAIEAAKAYDRAAFRLRGSKAILNFPLEA

> Glyma05g05180.1 (GmERF5)

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> Glyma05g05130.1 (GmERF6)

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> Glyma19g43820.1 (GmERF7)

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> Glyma20g34570.1 (GmERF8)

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> Glyma10g33060.1 (GmERF9)

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> Glyma17g15460.1 (GmERF10)

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>Glyma01g24380.1

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>Glyma20g29410.1

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>Glyma20g30840.1

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>Glyma20g31300.1

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>Glyma20g33800.1

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>Glyma20g33840.1

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>Glyma20g33890.1

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>Glyma20g34550.1

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>Glyma20g34560.1

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>Glyma20g35820.1

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>ERF II

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>ERF III

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>ERF IV

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>ERF V

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>ERF VI

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>ERF VII

VYRGIRKRPWGKWAAEIRDPRKGVRVWLGTFTNTAEEAAMAYDVA AKQIRGDKAKLNFP

>ERF VIII

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>ERF IX

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>ERF X

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>ERF VI-L

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>ERF XB-L

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>AP2 second

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>AP2 second

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>AP2 first

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