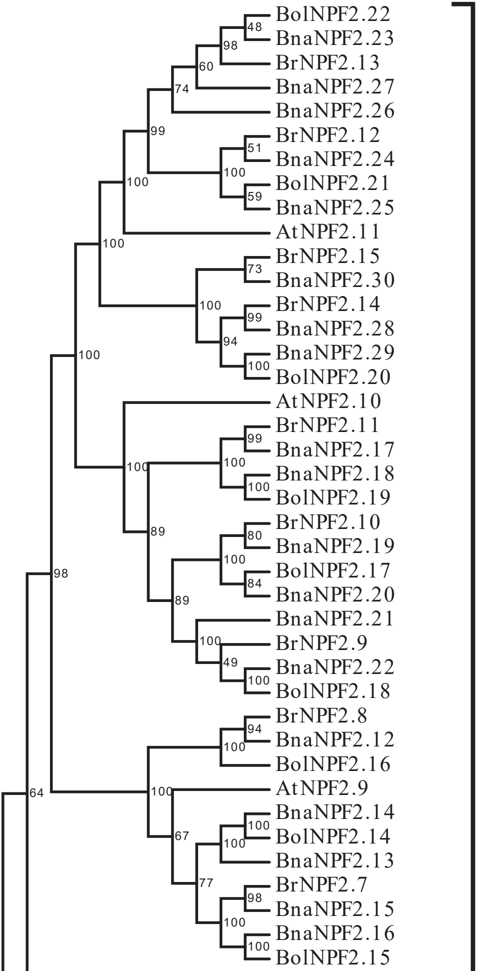
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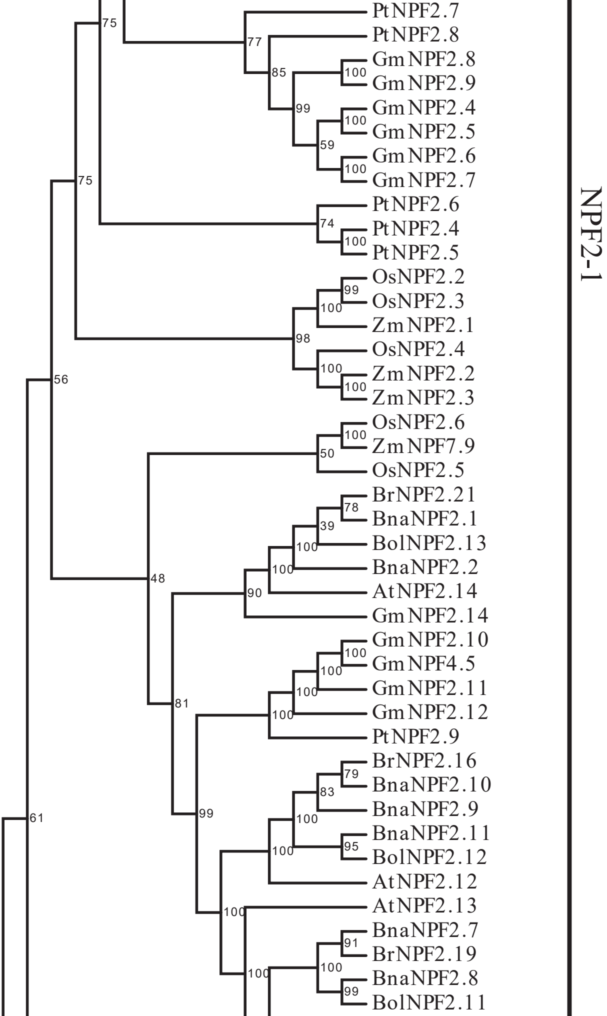
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OsNPF2.5
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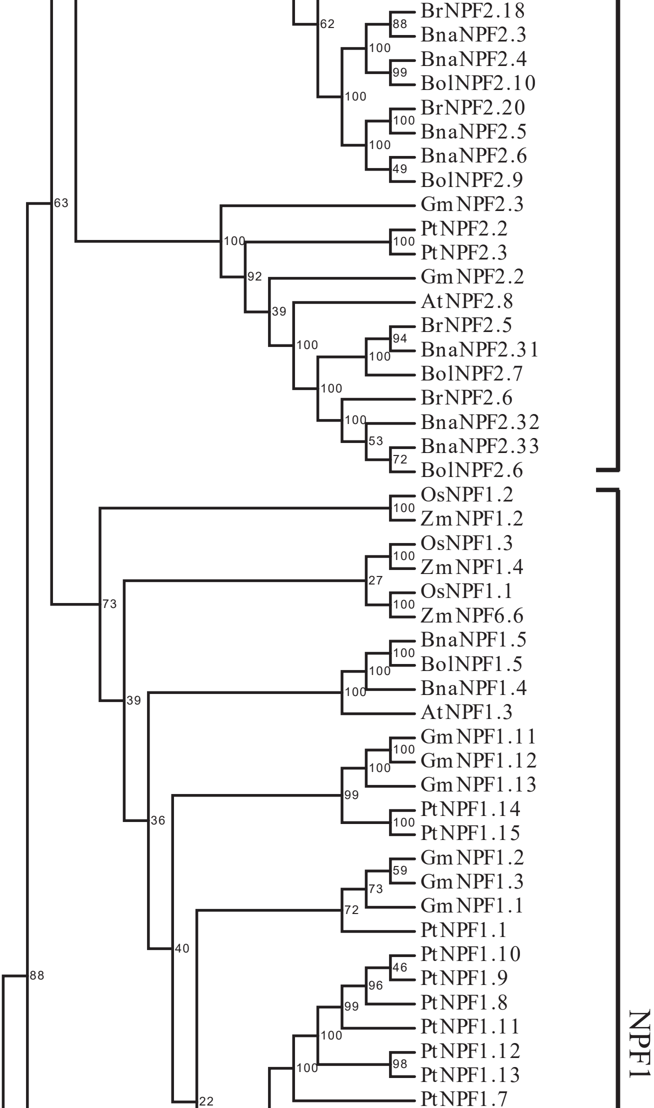
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BrNPF2.5
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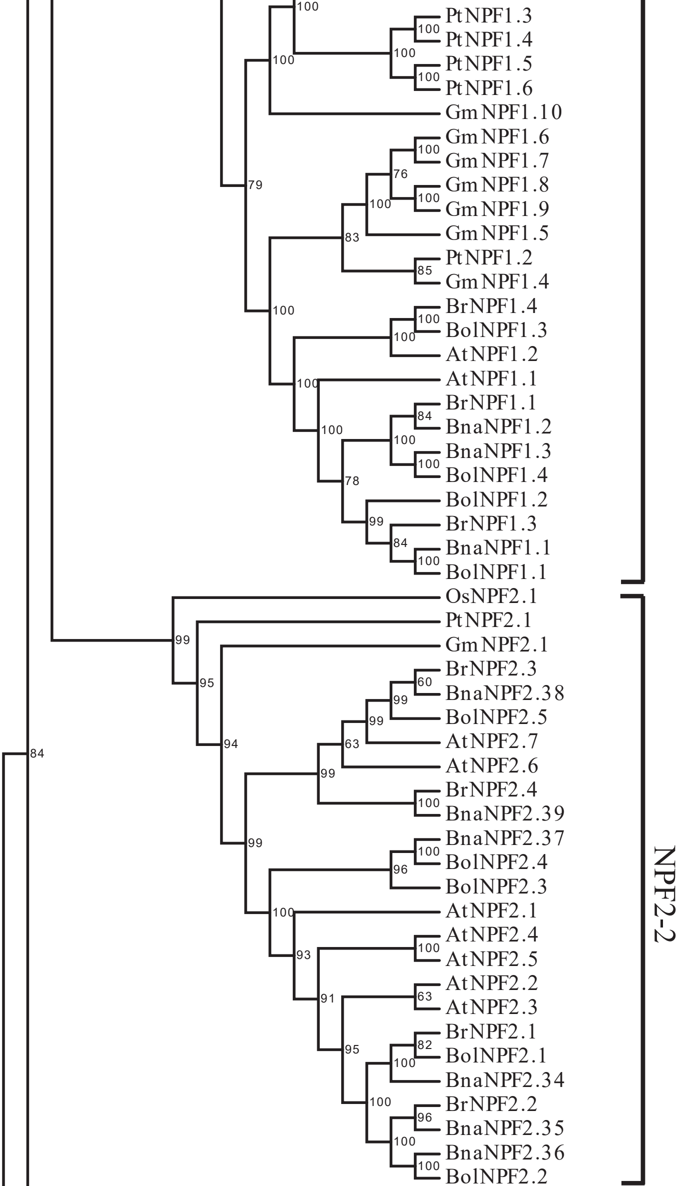
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BolNPF1.2
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BrNPF1.3
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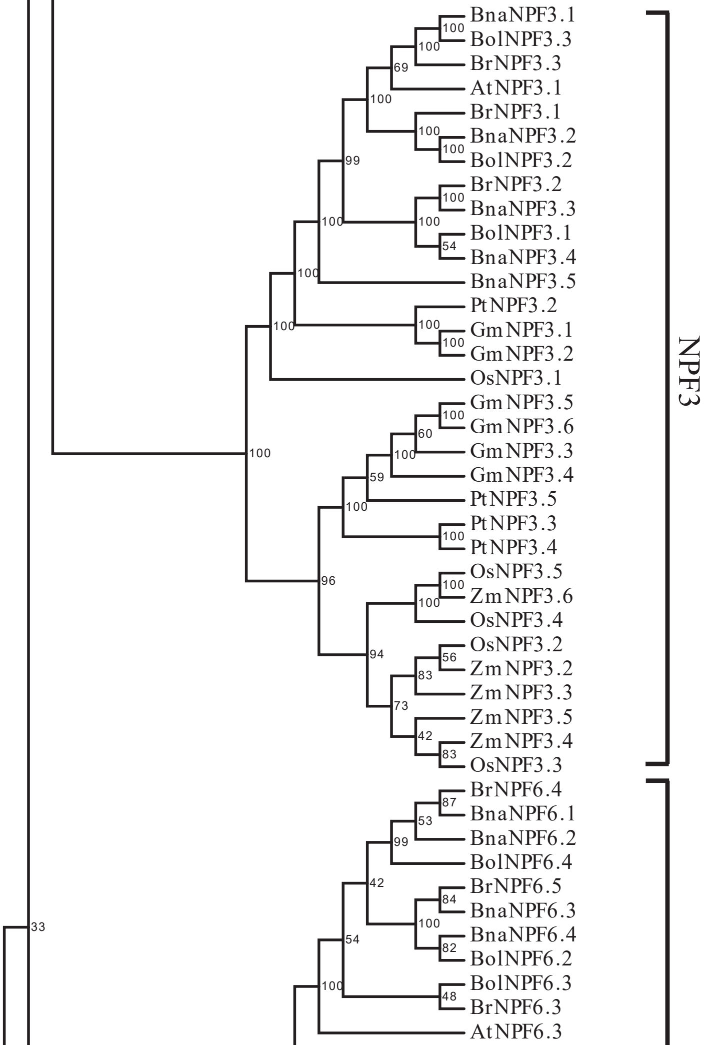
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GmNPF3.2
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GmNPF3.4
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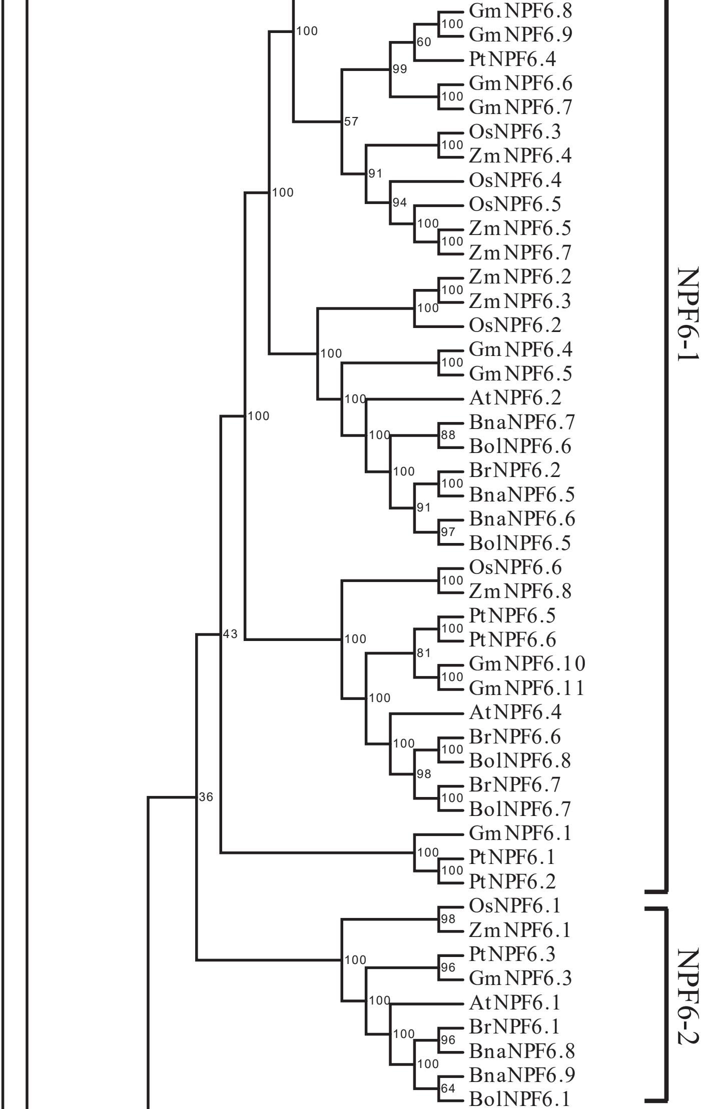
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GmNPF6.5
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BrNPF6.2
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BnaNPF6.6
BolNPF6.5
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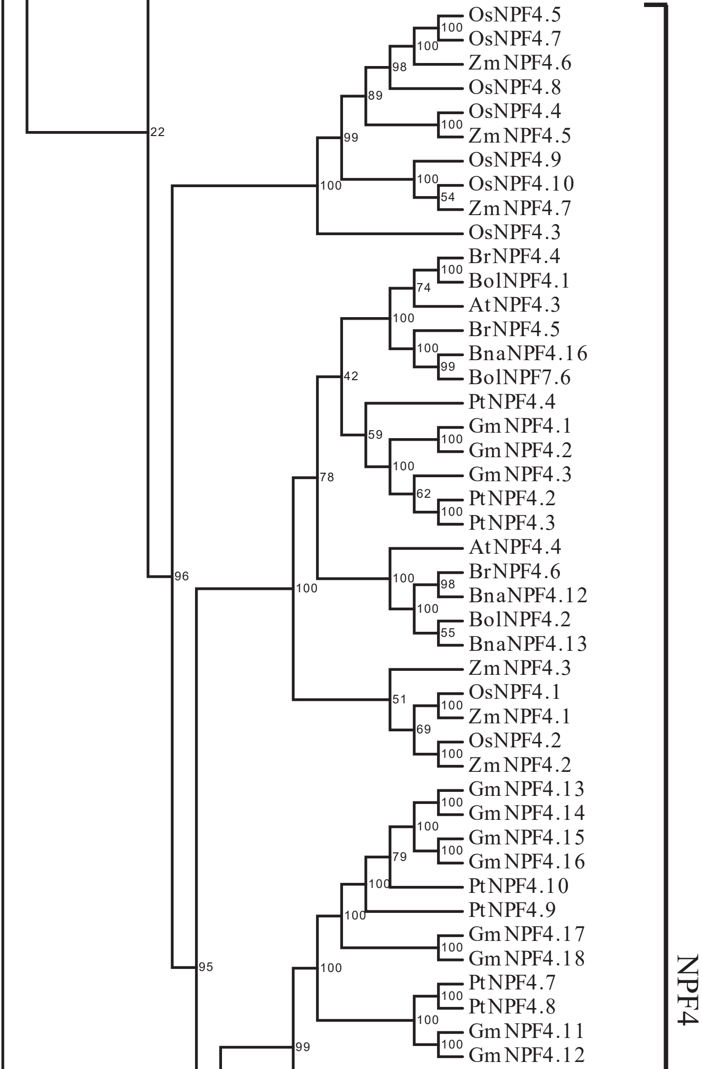
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BolNPF7.6
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BrNPF4.6
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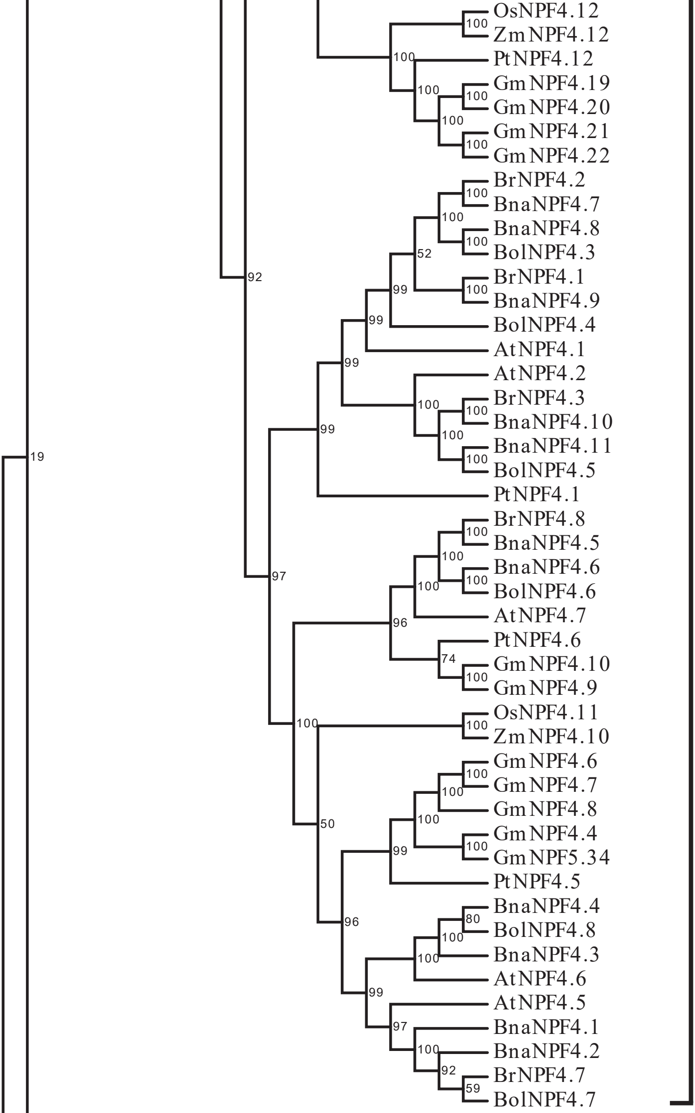
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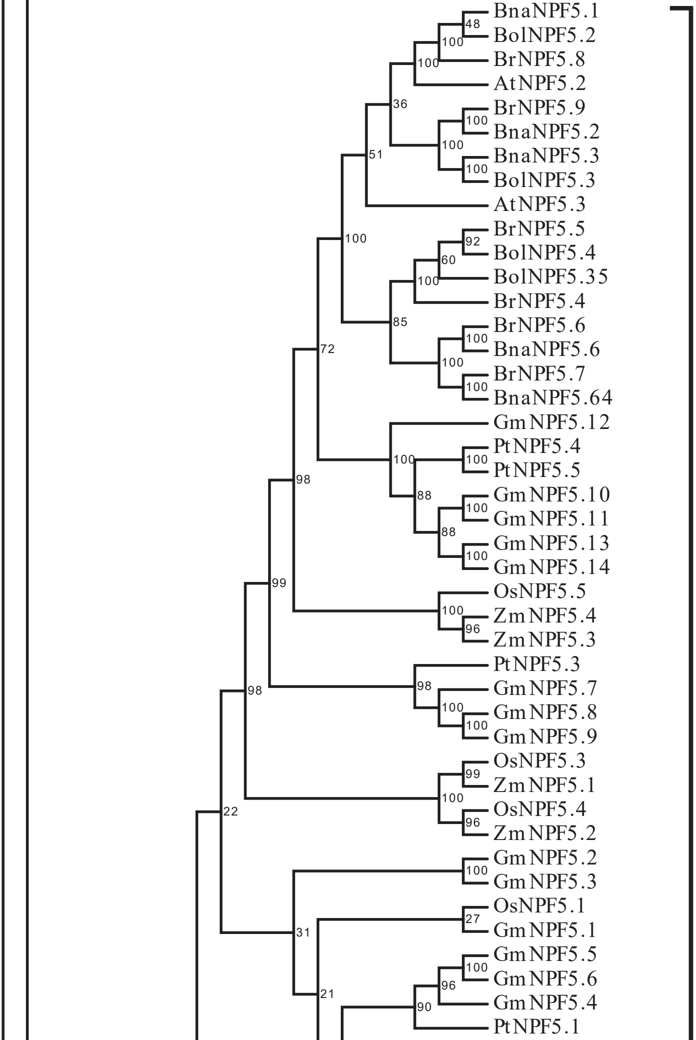
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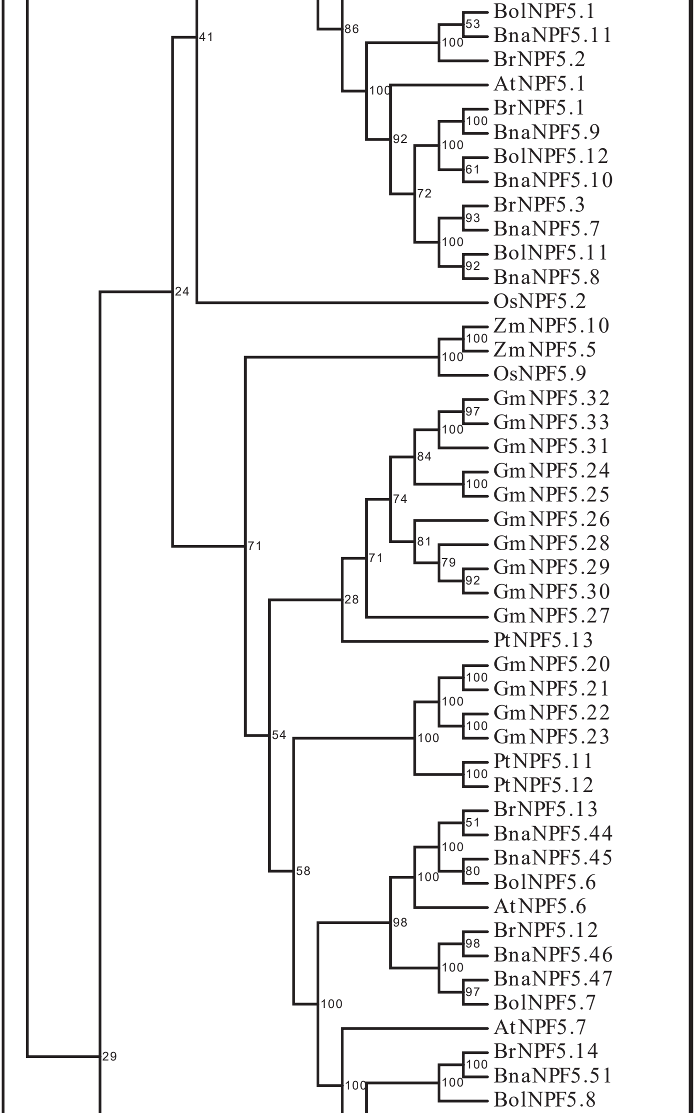
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BnaNPF5.8
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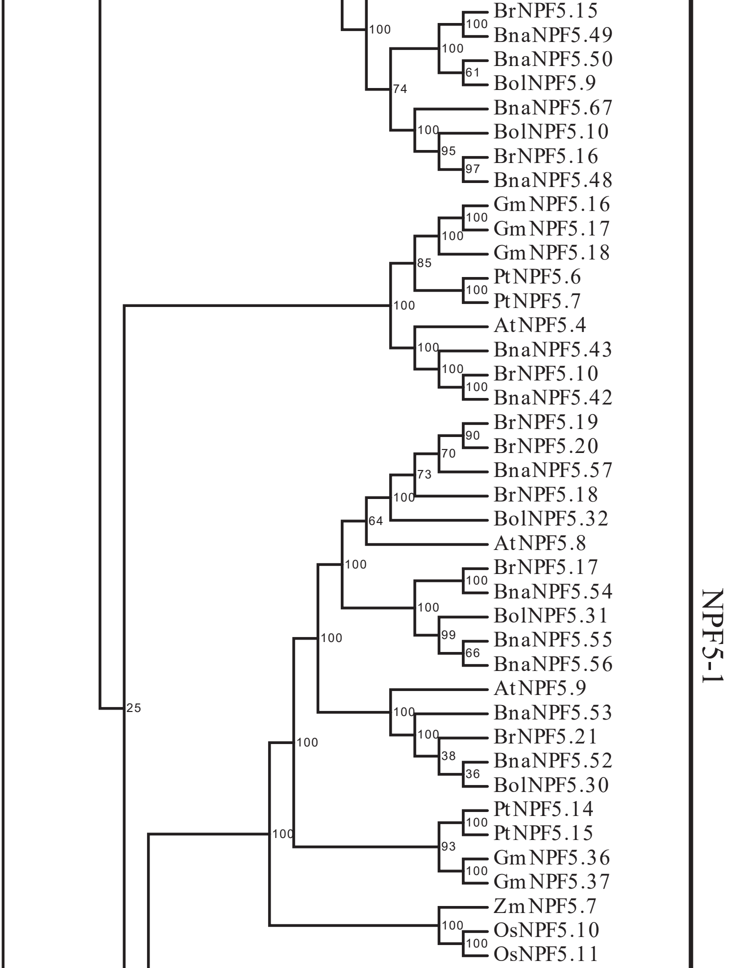
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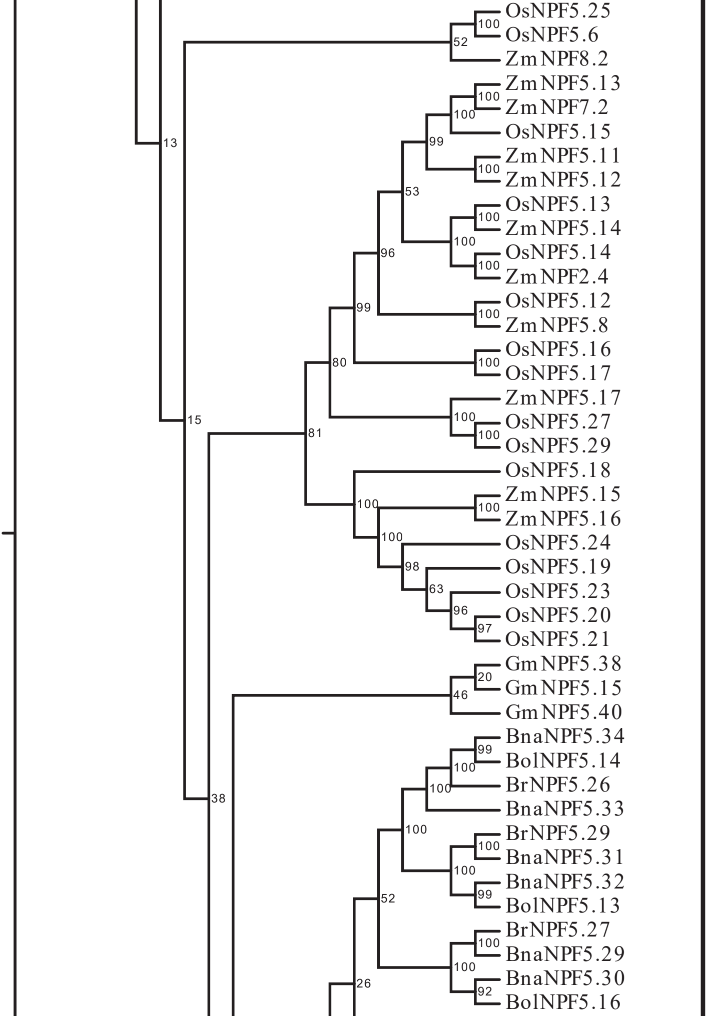
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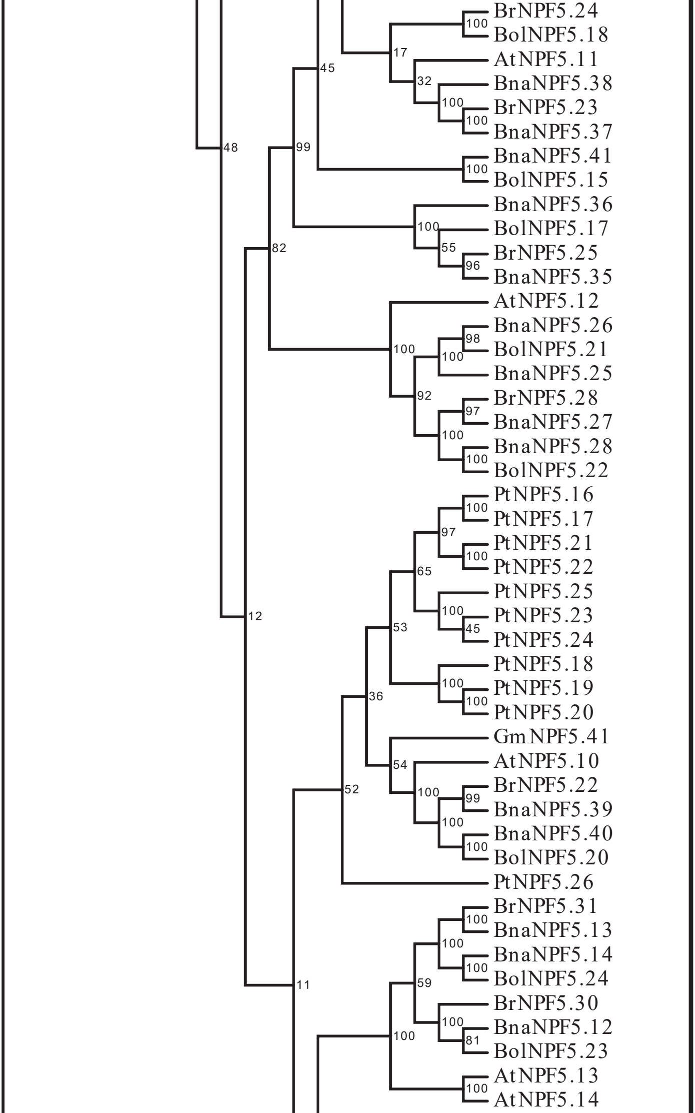
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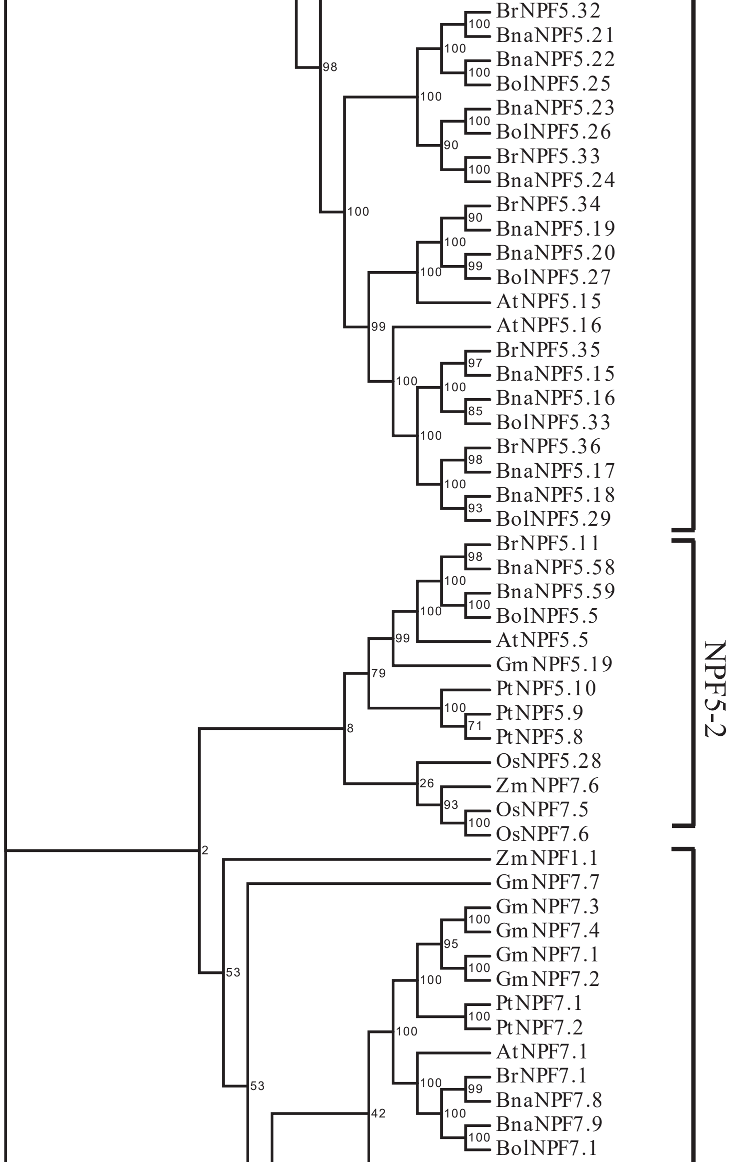
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BrNPF5.11
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PtNPF5.10
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PtNPF5.9
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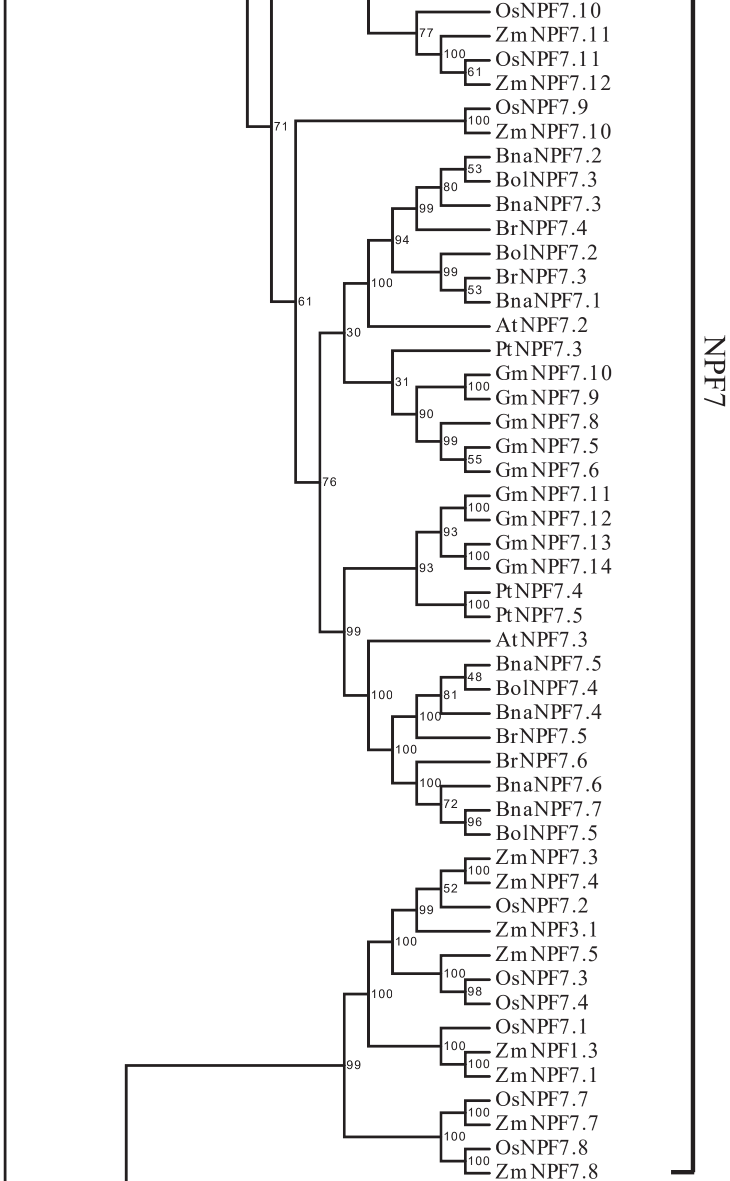
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BolNPF7.4
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ZmNPF7.4
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OsNPF7.1
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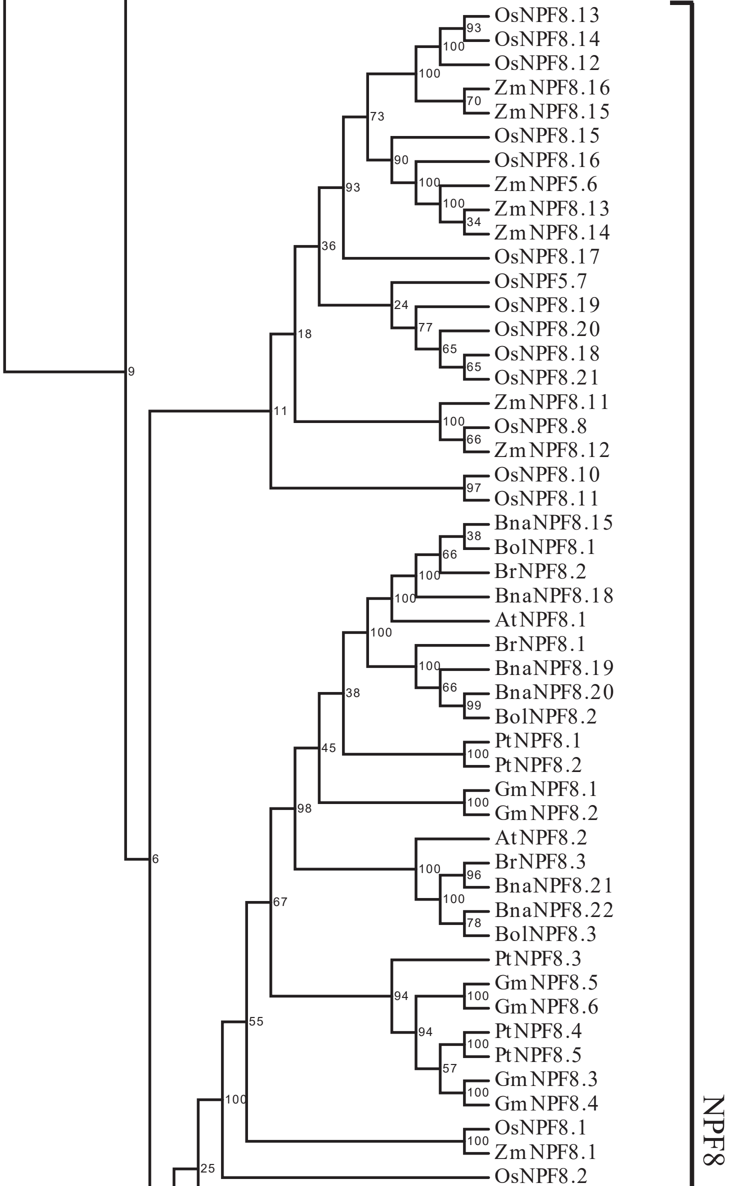
NPF7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BolNPF8.2
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AtNPF8.2
BrNPF8.3
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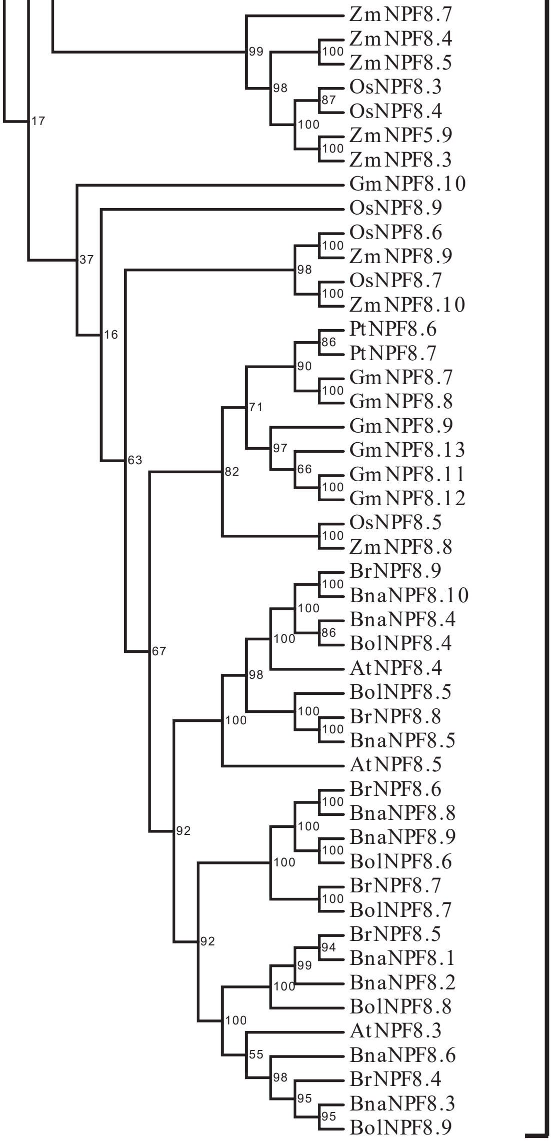
NPF8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OsNPF8.9
OsNPF8.6
ZmNPF8.9
OsNPF8.7
ZmNPF8.10
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PtNPF8.7
GmNPF8.7
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100
63
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100
100
100
100
86
100
67
98
100
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100
100
100
92
100
100
100
92
94
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100
100
55
98
95
95

Additional file 15: Neighbor-joining (NJ) tree of NPF proteins from *Arabidopsis*, *Oryza sativa*, *Populus trichocarpa*, *Zea mays*, *Brassica rapa*, *Brassica oleracea*, *Glycine max*, and *Brassica napus*. A total of 836 NPF proteins are used in the NJ tree, including At: 53, Os: 93, Pt: 85, Zm: 79, Br: 94, Bo: 100, Gm: 133 and Bn: 199. The candidate NPF proteins were divided into 11 subfamilies.