Supporting information









С 22 days old seedlings on MS plates (1% sucrose, 0.8% agar)









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Crude cellular extract samples:

- [1] Arabidopsis hmg1-1 mutant
- [2] Arabidopsis hmg1-1 mutant, AtHMGR1S (line #1)
- [3] Arabidopsis hmg1-1 mutant, AtHMGR1S_S577A (line #2)
- [4] Wild type Arabidopsis
- [5] Arabidopsis hmg1-1 mutant
- [6] Arabidopsis hmg1-1 mutant, AtHMGR1S (line #2)
- [7] Arabidopsis hmg1-1 mutant, AtHMGR1S_S577A (line #1)

FLAG-tag purified sample:

[8] FLAG-tag purified AtHMGR1S (line #2) as a control (~8ng)

Method for crude cellular extraction:

Each of 100 mg (fresh weight) tissues were homogenized in 200 μ l homogenization - 50 buffer supplemented with 1% TritonX-100, 3x plant protease inhibitor cocktail, 2x PhosSTOP[™], and 10 mM DTT, followed by centrifugation at 200 x g for 20 min. The .37 crude cellular extract samples (5 μ l) were mixed with sample buffer (10 μ l, Nacalai #30566-22) and then loaded into a precast gel (Bio-Rad #456-8095).

Figure S1. The expression of 35S::HMGR1S-FLAG or 35S::HMGR1S_S577A-FLAG complemented the pleiotropic phenotype of Arabidopsis (WS) hmg1-1 mutant.

Arabidopsis seedlings (14 days old) grown on MS plate with 3% sucrose and 1.2% agar [A]. Arabidopsis seedlings 12 days old [B] and 22 days old [C] grown on MS plate with 1% sucrose, 0.8% agar. Arabidopsis seedlings (14 days old) grown on MS plate with 3% sucrose, 1.2% agar, and 300 nM lovastatin [D]. The crude cellular extracts of Arabidopsis seedlings from [A] were fractionated on SDS-PAGE with FLAG-tag purified AtHMGR1S (line #2) as a control [E]. The HMGR band of lane-4 migrated a bit faster because it is derived from a wild type *Arabidopsis* which does not contain a FLAG-tag moiety.

Evidence that the Arabidopsis thaliana HMG-CoA reductase 1 is phosphorylated at Ser577 in Arabidopsis



Figure S2. The phosphatase inhibitors treatment induced phosphorylation at other than S577. The Phos-tag SDS-PAGE of samples in lanes 1, 2, 10, and 11 was repeated without the addition of lambda phosphatase buffer to get sharp separation of protein bands. The phosphorylated HMGR has slower electrophoretic mobility (indicated by black arrow and asterisks) compared to the nonphosphorylated HMGR (indicated by blank arrow) in Phos-tag SDS-PAGE.

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