Table S1. Primers used in the study.

		Forward(5'-3')	**Reverse(5'-3')**
cDNAs	*HsTPS1*	ATGGCAGTCCTGACGCT	TCATTTCATCCTGATCTGTTC
	*HsTPS*2	ATGGCTTTCTCCAATATTTGCTGT	TTAAAGTGGAATAGAATCAATCAGT
qRT-PCR	*HsTPS1*	TTCCAAGTTGGTCTGAGCAAGGTC	ACTCGCCGGTGTCATTCATGTG
	*HsTPS*2	GGCGACTTCAACGGCTGAGC	AGCGATGGCCTCTGTGACTCC
	HsActin	GAACTGGTATGGTCAAGGCTG	ACACGGAGCTCGTTGTAGAAG
Generation of constructs used in Heterologous expression in Escherichia coli.	*HsTPS1*	GGTGGTGGTGCTCGAAT GGCAGTCCTGACGCTG	TGCGGCCGCACTCGATTTC ATCCTGATCTGTTCAATGAAC
	*HsTPS*2	GGTGGTGGTGCTCGAATG GCTTTCTCCAATATTTGCTG	TGCGGCCGCACTCGAGTGG ATAGAATCAATCAGTAGAGAG
Generation of constructs used in subcellular localization	*HsTPS1*	CGGTACCCGGGGATCCAT GGCAGTCCTGACGCT	TGCTCACCATGTCGACTTTC ATCCTGATCTGTTCAATGAA
	*HsTPS*2	CGGTACCCGGGGATCCAT GGCTTTCTCCAATATTTGCTG	TGCTCACCATGTCGACGTGG ATAGAATCAATCAGTAGAGAGAAG

Table S2. Sequences of nucleic acid and amino acid.

	HsTPS1 (1758bp)	*HsTPS2* (1770bp)
cDNAs	ATGGCAGTCCTGACGCTGCACAGTGTGGTGCTAGTT	ATGGCTTTCTCCAATATTTGCTGTTGCACTAGCTTTG
	GATGATCACCGATTCCTCTCCTTGACAAGGCTTCACA	TCCCCTTGAAATCTGTAAGACCAAATAGATTGCTGTT
	GATGCTCAAATGTTCGAGCAGAGATGCCGAGACGGA	CTGCCATGCACAGGGTGGTGCACGTCGTAAATCCTC
	TCTTACCCCTCCGAGCCAGGGGCTGCTCGGTCGGGA	CTCCATAGCTGCTAAAACCTCGCCGGAACTCACTAA
	TGCAAGCGAATTCGCGCAGGTCAGCCAACTACCACC	TAATAGTGAGCGGCGATCCGCAAATTATCCGCCAAG
	CCACCATTTGGGAGCACGGCCGCATCGAGACGATCA	TGTGTGGGAGGATGGATACATACAGTCGCTAAGGAT
	ACAGTCCTTATTCAGATACTGCTTTTAGTTCGCGCATT	TGATTTCATGGGAGACGATTTTGATTCCCAGCTCAG
	GGGGTATTGAAGCTTCAGACAAAGCAGTTGCTCAAA	GAAGTTGAAGGAAGAGGTGAGGCATCTTCTTGGCG
	GAACTGGACGAGACGATTTCCAAGCTCGAACTCATT	AGGGAACGGAACGTGTTCGTCAACTTCAGGTTGTC
	GATTCTCTGCAACGTCTTGGAGTGGGCTATCATTTCA	GACGCCCTGCAACAGCTAGGAGTGGCGTATCACTTT
	AAGAGGAGATCAGAGTCGTGTTAGATCAAATCCATAT	GAAAAGGAGATCAAAGATGTATTGACCACTATATAC
	CAATGGTTTTGGGTCTCTTACCAGTTTCTATGGAACT	AGATCAAAAGACAACACGATCATGGGGATGAAGGA
	GCACTTTGCTTCCGGCTCCTGCGACAACATGGTTACA	TGACCTTTATGCAACATCCTTGTTCTTTAGACTTCTG
	ATGTGTCTTCTGATATATTCAATAGTTTTAGAGATGAA	AGGGAACATGGGTTCCATACCTCAGCAGATATTTTC
	CAAGGATTCATGAATTGCTTATGCCATGATGCTAAGG	AACAGCTTTAGAGATGAAAAAGGCAGCTTCAATGC
	GACTATTGAGCTTATACGAAGCTGCCCACCTCGGAGT	CAATCTTTCCAATGACATCAAGGGCATGTTGAGTCT
	CTATGGAGAGAAGACACTAGAAGAAGCCAAGGAATT	CTACGAGGCCTCCTTTCTTGCAATGGAAGGGGAGAA
	CAGTGTAAGGCATCTAAAGTGCCTAGAAGAGGAGGT	TGAAATGGATGAAGCCAGACAATTCACAACTGATTG
	GGATTTGAATCTAGTTGAGCAAATCAAGCACTCTCTT	TCTAAAAGATCATACTTCAAGATTCTTAATAGAGCCA
	GAGATTCCCTTGCATTGGAGGATGCCGAGGCTAGAA	TCATTGAAGGAGAAAGTGAATCATGCATTAGAGCTC
	GCTAGGCATTATATAGATGTTTATGAAAGAGTCGAGG	CCCTTACATTGGAGAATGCAAAGGCTACATACTCGG
	GGAGGAGCTCCGTTTTGCTTGAGCTAGCCAAGTTAG	TGGTTCATAGACCAATATGAGAGAGAAGAGGACATG

	ATTTCAATGTTGTACAGTCCATACATCAAGAGGAGGT TAAGGAACTATCAAGATGGTGGAAAGAATTGAGCTT GGGAGATGAGCTTAAATTTTCTAGAGATCGGTTGTTT GAGAATTACCTGTGGGCTGCAGGGATTGCTCATGAA CCGCGATTTTCCAAGTGCCGGAAGGTTCTCACCAAG CTCATCTGTATCTTAACAGTGATCGATGATATATATGAT GTTTATGGGTCATTAGAAGAACTGGTACTATTTACATC AGCAATTAAAAGTTGGGATTCTAGGGCCATAGGAGCT CTTCCTGACTACTTGAAGGTATGCTTCAATGCATTATA CAACTTCGTTAAGGAGACTGCAAGTGATATCCACAA GGATTATGGGTGGGATGTCACACACTTCATAAAAAGA GAATGGGAGAATCTTTGTGAAGCATACTTAAAAGAA GCAAAATGGTTCAACAAAGGATACAAACCAACCCTA AGTGAATATTTGGGAAATGCATGGGTTTCAGTGGGAG GTCCAATCTCGATGGTTCATGCATATTTTGTCATAGAG CACAACTCTTCCAAAATGCTTCCAAGTTGGTCTGAGC AAGGTCATGGTATCATATATTGGTCTTCGTTGATCACT CGTCTTAGTGATGACTTGGGAACTTCTGAGGCTGAGA TGCAGAGAGGAGACATACCAAAATCAATGCAATGCC ACATGAATGACACCGGCGAGTCAGATGCCACTTCCA AAGAGTACATCAAGGATTTTATTACCAGTTCATGGTT GAATCTCAACAAGGAATTTCTGACAAACAATCATCCA ACAGAATTTGCTAATCTGATCTTAAACATGGCGAGAA CGGCCCAGTGTATCTTTCAGCATGGAGATGACATAGG AAATTCAACTGGCACAATGAAGAACAGGCTCACCTC CTTGTTCATTGAACAGATCAGGATGAAATGA	AACCCTTCACTGCTCAAATTGGCAAAATTAGATTTC AATATGCTGCAAGGAATTTATAAAAAAGAACTCAAG GAGTTGTCAAGGTGGTGGACGAATCTCGGTCTTGG ACAGAGCCTAGGTTTTTCAAGAGATCGGTTGGCAG AGAACTATTTATGGGCAATAGGCTATGCTTTTGAGCC AAAATTTTCGAGATGTAGAGAAGCAGTGACAAAGT CCATTTGCTTTATAACAATGATTGATGATTTATATGAT GTTTACGGCTCACAGGAAGAACTTGAGCTCTTTACA GATTCTGTTATTAGGTGGGAGACAGATGCCATTGAA CAACTTCCGAATTACATGAAGATTCTCTTTTTTGCAC TTTTCAACACGACTAATGATATGGCATACAAAACTTT GAAACTGAAGGGAATAAATGTTCTTCCATACTTACA GAGAGCATGGGCAGATCTTTGTAAATCATACTTAGT CGAGGCTAAATGGTTCGCTGAAGGATACACGCCGAC ACTAAAGGAGTACCTAGATAATGCATGGATTTCAATG TCAGGACACATCGAACTAACAGATGCTTTATGTACG AGTGATGATTTAACTGAGGAAGCACTAGAATGCTTC AACTTTTACCCTGATGTTGTTTGTCACTCATCTATGC TCTTTCGCCTTCATGATGATTTGGCGACTTCAACGGC TGAGCTTGAAAGAGGCGATGTCCCCAAGTCCATACA ATGCTATATGCATGAGAATGGAGTCACAGAGGCCAT CGCTCGTGAGTACATAAGCGAGATGGTTACTTCCAC ATGGAAGAAGCTGAATGGTGATCGCATTGCTAATTC CTCTTTCGTCGAATCCTTCAAAAAAGTAGCATTAAAT ATTCCGAGGATGTCACAATGCATATATCAAAATGGAG ATGGATATGGGAAACCTGAAGGTGAAACCAAGGAT CAAATCTTCTCTCTACTGATTGATTCTATCCACTAA
	HsTPS1 protein (586aa)	*HsTPS2 protein* (590aa)
Protein	*MAVLTLHSVVLVDDHRFLSLTRLHRCSNVRAEMPRRILPLR ARGCSVGMQANSRRSANYHPTIWEHGRIETINSPYSDTAFS SRIGVLKLQTKQLLKELDETISKLELIDSLQRLGVGYHFKE EIRVVLDQIHINGFGSLTSFYGTALCFRLLRQHGYNVSSDIF NSFRDEQGFMNCLCHDAKGLLSLYEAAHLGVYGEKTLEE AKEFSVRHLKCLEEEVDLNLVEQIKHSLEIPLHWRMPRLE ARHYIDVYERVEGRSSVLLELAKLDFNVVQSIHQEEVKELS RWWKELSLGDELKFSRDRLFENYLWAAGIAHEPRFSKCR KVLTKLICILTVIDDIYDVYGSLEELVLFTSAIKSWDSRAIGA LPDYLKVCFNALYNFVKETASDIHKDYGWDVTHFIKREWE NLCEAYLKEAKWFNKGYKPTLSEYLGNAWVSVGGPISMV HAYFVIEHNSSKMLPSWSEQGHGIIYWSSLITRLSDDLGTS EAEMQRGDIPKSMQCHMNDTGESDATSKEYIKDFITSSW LNLNKEFLTNNHPTEFANLILNMARTAQCIFQHGDDIGNS TGTMKNRLTSLFIEQIRMK*	*MAFSNICCCTSFVPLKSVRPNRLLFCHAQGGARRKSSSIA AKTSPELTNNSERRSANYPPSVWEDGYIQSLRIDFMGDDF DSQLRKLKEEVRHLLGEGTERVRQLQVVDALQQLGVAY HFEKEIKDVLTTIYRSKDNTIMGMKDDLYATSLFFRLLRE HGFHTSADIFNSFRDEKGSFNANLSNDIKGMLSLYEASFL AMEGENEMDEARQFTTDCLKDHTSRFLIEPSLKEKVNH ALELPLHWRMQRLHTRWFIDQYEREEDMNPSLLKLAKL DFNMLQGIYKKELKELSRWWTNLGLGQSLGFSRDRLAE NYLWAIGYAFEPKFSRCREAVTKSICFITMIDDLYDVYGSQ EELELFTDSVIRWETDAIEQLPNYMKILFFALFNTTNDMA YKTLKLKGINVLPYLQRAWADLCKSYLVEAKWFAEGYTPT LKEYLDNAWISMSGHIELTDALCTSDDLTEEALECFNFYP DVVCHSSMLFRLHDDLATSTAELERGDVPKSIQCYMHEN GVTEAIAREYISEMVTSTWKKLNGDRIANSSFVESFKKVAL NIPRMSQCIYQNGDGYGKPEGETKDQIFSLLIDSIH*

Figure S1. Flower developmental stages of *H.* 'So sweet'.

The stage of flower buds two or three days before full bloom (S1); flower buds one day before full bloom (S2); fully bloom flowers for one day (S3); and flowers one day after full bloom (S4).

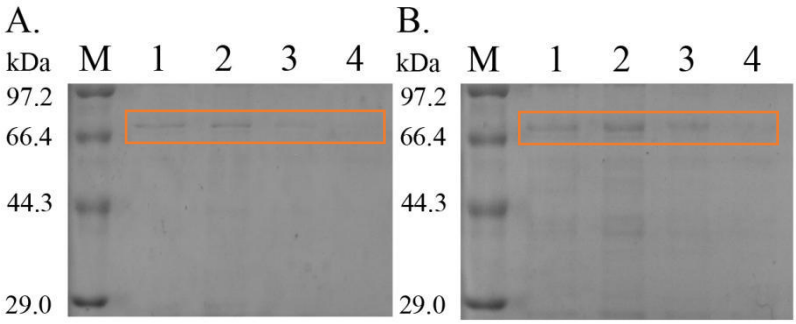

Figure S2. SDS-PAGE of purified HsTPS1 and HsTPS2 protein

Lane M: Markers (Premixed Protein Marker, Takara, Japan).

Lanes 1–4: HsTPS1 (A) and HsTPS2 (B) proteins eluted by imidazole at different concentrations: 10mM, 50mM, 100mM, 200mM.

The recombinant HsTPS1 and HsTPS2 band were observed with the expected size of ~68 kDa.