

**Tabel S1.** Identification of ACTIN family genes in *I. batatas*, *I. trifida*, and *I. triloba*

<i>Arabidopsis</i>	Homologous gene in <i>I.batatas/I. trifida/ I.triloba</i>	Gene ID	Gene name	Chromosome localization
Group I: <i>AT1G18450.1/AtACTIN2</i> <i>AT1G73910.3/AtACTIN4</i>	<i>I. batatas</i>	<i>g5780</i>	<i>IbACTIN2.1</i>	<i>LG2:10634614-10643350</i>
		<i>g52926</i>	<i>IbACTIN2.2</i>	<i>LG13:12873733-12882536</i>
	<i>I. trifida</i>	<i>itb04g21620.t2</i>	<i>ItbACTIN2.1</i>	<i>Chr04:26720295-26730623</i>
		<i>itb04g21620.t3</i>	<i>ItbACTIN2.2</i>	<i>Chr04:26720295-26730623</i>
		<i>itb04g21620.t1</i>	<i>ItbACTIN2.3</i>	<i>Chr04:26720239-26729819</i>
		<i>itb02g18870.t1</i>	<i>ItbACTIN2.4</i>	<i>Chr02:15463843-15473934</i>
	<i>I. triloba</i>	<i>itf04g22230.t1</i>	<i>ItfACTIN2.1</i>	<i>Chr04:23942908-23952028</i>
		<i>itf02g01360.t1</i>	<i>ItfACTIN2.2</i>	<i>Chr02:2012283-2020410</i>
	<i>I. batatas</i>	<i>g42892</i>	<i>IbACTIN16.1</i>	<i>LG11:10263499-10273033</i>
		<i>g63730</i>	<i>IbACTIN16.2</i>	<i>Chr02:28013749 28019280</i>
Group II: <i>AT3G60830.1/AtACTIN16</i>	<i>I. trifida</i>	<i>itf06g06170.t1</i>	<i>ItfACTIN16</i>	<i>Chr06:8568303-8573294</i>
	<i>I. triloba</i>	<i>itb06g06830.t1</i>	<i>ItbACTIN16</i>	<i>Chr06:9528314-9533861</i>
Group III: <i>AT1G49240.1/AtCTIN3</i> <i>AT2G42090.1/AtACTIN6</i> <i>AT2G42100.1/AtACTIN7</i> <i>AT2G42170.1/AtACTIN8</i> <i>AT3G18780.2/AtACTIN11</i> <i>AT5G09810.1/AtACTIN17</i>	<i>I. batatas</i>	<i>g52274</i>	<i>IbACTIN6</i>	<i>LG13:8143877-8147254</i>
		<i>g51848</i>	<i>IbACTIN7</i>	<i>LG13:4939481-4942036</i>
		<i>g46627</i>	<i>IbACTIN17.1</i>	<i>LG11:38636327-38646881</i>
		<i>g60046</i>	<i>IbACTIN17.2</i>	<i>LG15:1033740-1036720</i>
		<i>g27691</i>	<i>IbACTIN17.3</i>	<i>LG7:18085208-18088091</i>
		<i>g723</i>	<i>IbACTIN17.4</i>	<i>LG1:4228622-4231353</i>
	<i>I. trifida</i>	<i>itf02g19390.t1</i>	<i>ItfACTIN3</i>	<i>Chr02:15433758-15434057</i>
		<i>itf05g21320.t1</i>	<i>ItfACTIN17.1</i>	<i>Chr05:22330425-22333096</i>
		<i>itf05g21330.t1</i>	<i>ItfACTIN17.2</i>	<i>Chr05:22338792-22341577</i>
		<i>itf01g02100.t1</i>	<i>ItfACTIN17.3</i>	<i>Chr01:1256415-1261187</i>
		<i>itf06g25410.t1</i>	<i>ItfACTIN17.4</i>	<i>Chr06:25189874-25192861</i>
		<i>itf06g25410.t2</i>	<i>ItfACTIN17.5</i>	<i>Chr06:25189914-25192861</i>
		<i>itf00g14370.t1</i>	<i>ItfACTIN17.6</i>	<i>Chr00:24154613-24154924</i>
		<i>itb05g21980.t1</i>	<i>ItbACTIN17.1</i>	<i>Chr05:27559059-27561875</i>
	<i>I. triloba</i>	<i>itb03g12460.t2</i>	<i>ItbACTIN17.2</i>	<i>Chr03:11719074-11721881</i>
		<i>itb03g12460.t5</i>	<i>ItbACTIN17.5</i>	<i>Chr03:11718987-11722082</i>
		<i>itb03g12460.t4</i>	<i>ItbACTIN17.3</i>	<i>Chr03:11718969-11721884</i>
		<i>itb03g12460.t3</i>	<i>ItbACTIN17.4</i>	<i>Chr03:11718987-11722082</i>
		<i>itb03g12460.t1</i>	<i>ItbACTIN17.6</i>	<i>Chr03:11718969-11722082</i>
		<i>itb01g02250.t1</i>	<i>ItbACTIN17.7</i>	<i>Chr01:1454234-1458355</i>
		<i>itb06g24200.t1</i>	<i>ItbACTIN17.8</i>	<i>Chr06:25861466-25864536</i>

<p>Group IV:</p> <p>AT2G37620.1/AtACTIN5</p> <p>AT3G12110.1/AtACTIN9</p> <p>AT3G46520.1/AtACTIN14</p> <p>AT3G53750.1/AtACTIN15</p> <p>AT5G59370.1/AtACTIN20</p>	<i>I. batatas</i>	<i>g4902</i>	<i>IbACTIN5.1</i>	<i>LG2:4782667-4785108</i>
		<i>g40273</i>	<i>IbACTIN5.2</i>	<i>LG10:15487139-15490779</i>
		<i>g9979</i>	<i>IbACTIN5.3</i>	<i>LG3:3786950-3788680</i>
		<i>g18180</i>	<i>IbACTIN5.4</i>	<i>LG5:11043057-11044971</i>
		<i>g24983</i>	<i>IbACTIN5.5</i>	<i>LG6:29890926-29893324</i>
		<i>g43021</i>	<i>IbACTIN5.6</i>	<i>LG11:11180492-11182509</i>
		<i>g3675</i>	<i>IbACTIN5.7</i>	<i>LG1 :26414931-26418418</i>
		<i>g24981</i>	<i>IbACTIN5.8</i>	<i>LG6:29880896-29885825</i>
		<i>g25621</i>	<i>IbACTIN9</i>	<i>LG7:2170022-2172796</i>
		<i>g58376</i>	<i>IbACTIN15</i>	<i>LG14:21779935-21783209</i>
		<i>g20278</i>	<i>IbACTIN20</i>	<i>LG5:26886916-26889430</i>
	<i>I. trifida</i>	<i>itf04g29720.t1</i>	<i>ItfACTIN5.1</i>	<i>Chr04:29194146-29196490</i>
		<i>itf08g17480.t1</i>	<i>ItfACTIN5.2</i>	<i>Chr08:17604992-17608424</i>
		<i>itf08g17480.t2</i>	<i>ItfACTIN5.3</i>	<i>Chr08:17605115-17608424</i>
		<i>itf14g15680.t1</i>	<i>ItfACTIN5.4</i>	<i>Chr14:16240499-16242679</i>
		<i>itf01g24130.t1</i>	<i>ItfACTIN5.5</i>	<i>Chr01:24440038-24442798</i>
		<i>itf05g04190.t1</i>	<i>ItfACTIN5.6</i>	<i>Chr05:3931060-3934026</i>
		<i>itf05g04190.t2</i>	<i>ItfACTIN5.7</i>	<i>Chr05:3931060-3934175</i>
		<i>itf15g02700.t2</i>	<i>ItfACTIN5.8</i>	<i>Chr15:1616320-1618673</i>
		<i>itf15g02700.t1</i>	<i>ItfACTIN5.9</i>	<i>Chr15:1616287-1618760</i>
		<i>itf15g02720.t1</i>	<i>ItfACTIN5.10</i>	<i>Chr15:1623970-1626886</i>
	<i>I. triloba</i>	<i>itf03g15730.t1</i>	<i>ItfACTIN9</i>	<i>Chr03:12818363-12821281</i>
		<i>itf09g12320.t1</i>	<i>ItfACTIN15</i>	<i>Chr09:7282048-7285244</i>
		<i>itf02g19380.t1</i>	<i>ItfACTIN20.1</i>	<i>Chr02:15433184-15433719</i>
		<i>itf02g02770.t1</i>	<i>ItfACTIN20.2</i>	<i>Chr02:3821119-3821661</i>
		<i>itf12g22550.t1</i>	<i>ItfACTIN20.3</i>	<i>Chr12:21077812-21079346</i>
		<i>itb04g29160.t2</i>	<i>ItbACTIN5.1</i>	<i>Chr04:32639044-32641007</i>
		<i>itb04g29160.t1</i>	<i>ItbACTIN5.2</i>	<i>Chr04:32639044-32641481</i>
		<i>itb08g13090.t1</i>	<i>ItbACTIN5.3</i>	<i>Chr08:13629731-13633420</i>
		<i>itb14g17260.t1</i>	<i>ItbACTIN5.4</i>	<i>Chr14:20536211-20538452</i>
		<i>itb15g02990.t1</i>	<i>ItbACTIN5.5</i>	<i>Chr15:1896361-1897203</i>
		<i>itb15g02940.t1</i>	<i>ItbACTIN5.6</i>	<i>Chr15:1873904-1874327</i>
		<i>itb01g23970.t1</i>	<i>ItbACTIN5.7</i>	<i>Chr01:29780602-29783416</i>
		<i>itb15g02970.t1</i>	<i>ItbACTIN5.8</i>	<i>Chr15:1888710-1889133</i>
		<i>itb05g03600.t3</i>	<i>ItbACTIN5.9</i>	<i>Chr05:3092648-3095006</i>
		<i>itb05g03600.t1</i>	<i>ItbACTIN5.10</i>	<i>Chr05:3092648-3095887</i>
		<i>itb05g03600.t2</i>	<i>ItbACTIN5.11</i>	<i>Chr05:3092648-3095887</i>
		<i>itb15g03010.t2</i>	<i>ItbACTIN5.12</i>	<i>Chr15:1903507-1905960</i>

		<i>itb15g03010.t1</i>	<i>ItbACTIN5.13</i>	<i>Chr15:1903507-1905960</i>
		<i>itb15g03030.t2</i>	<i>ItbACTIN5.14</i>	<i>Chr15:1911558-1914177</i>
		<i>itb15g03030.t1</i>	<i>ItbACTIN5.15</i>	<i>Chr15:1911499-1914448</i>
		<i>itb09g20170.t1</i>	<i>ItbACTIN5.16</i>	<i>Chr09:16859717-16862484</i>
		<i>itb09g20270.t1</i>	<i>ItbACTIN5.17</i>	<i>Chr09:17032924-17036551</i>
		<i>itb03g16410.t1</i>	<i>ItbACTIN9</i>	<i>Chr03:15383270-15386152</i>
		<i>itb09g13330.t1</i>	<i>ItbACTIN15</i>	<i>Chr09:8683943-8687216</i>
		<i>itb02g24040.t1</i>	<i>ItbACTIN20.1</i>	<i>Chr02:24367716-24368489</i>
		<i>itb12g22900.t1</i>	<i>ItbACTIN20.2</i>	<i>Chr12:24814397-24817275</i>
<p>Group V:</p> <p><i>AT1G13180.1/AtACTIN1</i></p> <p><i>AT3G12380.2/AtACTIN10</i></p> <p><i>AT3G27000.1/AtACTIN12</i></p> <p><i>AT3G33520.1/AtACTIN13</i></p> <p><i>AT5G56180.1/AtACTIN19</i></p>	<i>I. batatas</i>	<i>g40378</i>	<i>IbACTIN1</i>	<i>LG10:16133537-16136575</i>
		<i>g2351</i>	<i>IbACTIN10.1</i>	<i>LG1:16187825-16194236</i>
		<i>g2496</i>	<i>IbACTIN10.2</i>	<i>LG1:17381916-17388417</i>
		<i>g64096</i>	<i>IbACTIN12.1</i>	<i>LG15:30654675-30660529</i>
		<i>g48567</i>	<i>IbACTIN12.2</i>	<i>LG12:12507463-12510529</i>
		<i>g18621</i>	<i>IbACTIN12.3</i>	<i>LG5:14393760-14396471</i>
		<i>g26691</i>	<i>IbACTIN13</i>	<i>LG7:10274134-10278725</i>
		<i>g61314</i>	<i>IbACTIN19</i>	<i>LG15:9374643-9379415</i>
	<i>I. trifida</i>	<i>itf08g11490.t1</i>	<i>ItfACTIN1</i>	<i>Chr08:10142923-10149460</i>
		<i>itf05g10940.t1</i>	<i>ItfACTIN10</i>	<i>Chr05:13043140-13049666</i>
		<i>itf06g08850.t1</i>	<i>ItfACTIN12.1</i>	<i>Chr06:11115639-11119977</i>
		<i>itf06g08850.t2</i>	<i>ItfACTIN12.2</i>	<i>Chr06:11115639-11118311</i>
		<i>itf06g08850.t3</i>	<i>ItfACTIN12.3</i>	<i>Chr06:11115654-11118022</i>
		<i>itf03g23030.t1</i>	<i>ItfACTIN13.1</i>	<i>Chr03:18535286-18540780</i>
		<i>itf03g23030.t3</i>	<i>ItfACTIN13.2</i>	<i>Chr03:18535287-18540780</i>
		<i>itf03g23030.t2</i>	<i>ItfACTIN13.3</i>	<i>Chr03:18536189-18540780</i>
	<i>I. triloba</i>	<i>itf06g15430.t1</i>	<i>ItfACTIN19.1</i>	<i>Chr06:18603669-18608687</i>
		<i>itf06g15430.t2</i>	<i>ItfACTIN19.2</i>	<i>Chr06:18603669-18608687</i>
		<i>itb08g10310.t1</i>	<i>ItbACTIN1</i>	<i>Chr08:9730655-9737268</i>
		<i>itb05g11200.t1</i>	<i>ItbACTIN10</i>	<i>Chr05:17179310-17185919</i>
		<i>itb06g06230.t1</i>	<i>ItbACTIN12</i>	<i>Chr06:8901725-8906191</i>
		<i>itb03g28750.t1</i>	<i>ItbACTIN13.1</i>	<i>Chr03:29447310-29452052</i>
		<i>itb03g28750.t3</i>	<i>ItbACTIN13.2</i>	<i>Chr03:29447310-29452052</i>
		<i>itb03g28750.t2</i>	<i>ItbACTIN13.3</i>	<i>Chr03:29447660-29452051</i>
<p>Group VI:</p> <p><i>AT5G43500.1/AtACTIN18</i></p>	<i>I. batatas</i>	<i>g13139</i>	<i>IbACTIN18</i>	<i>LG4:2514467-2519966</i>
	<i>I. trifida</i>	<i>itf13g20930.t1</i>	<i>ItfACTIN18.1</i>	<i>Chr13:21581222-21586969</i>

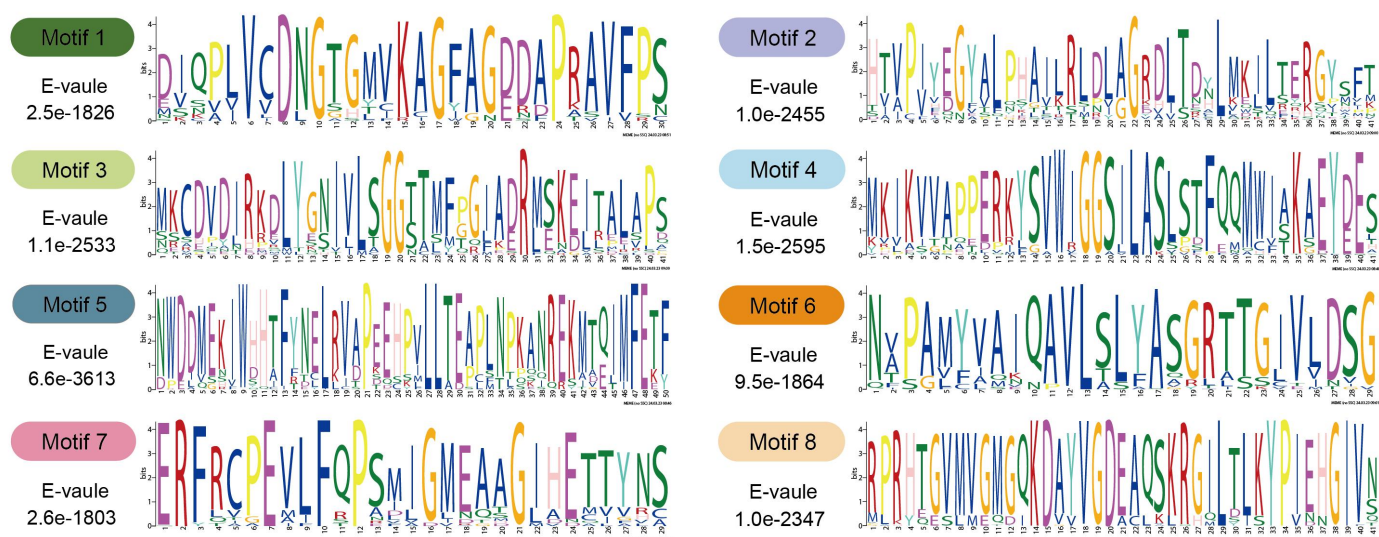
	<i>itf13g20930.t3</i>	<i>ItfACTIN18.2</i>	<i>Chr13:21581222-21586172</i>
	<i>itf13g20930.t2</i>	<i>ItfACTIN18.3</i>	<i>Chr13:21581222-21586969</i>
	<i>itf13g20930.t4</i>	<i>ItfACTIN18.4</i>	<i>Chr13:21582313-21586969</i>
<i>I. triloba</i>	<i>itb13g24490.t1</i>	<i>ItbACTIN18</i>	<i>Chr13:30154071-30162839</i>

**Tabel S2.** The Responses of *Itf*ACTINs and *Itb*ACTINs to hormones.

ID	Groups	ABA	IAA	GA3	BAP
<i>Itf</i> ACTIN2.1	GroupI	induced	repressed	induced	induced
<i>Itf</i> ACTIN2.2		induced	repressed	induced	induced
<i>Itf</i> ACTIN16	GroupII	induced	repressed	induced	induced
<i>Itf</i> ACTIN3	GroupIII	-	-	-	-
<i>Itf</i> ACTIN17.1		induced	repressed	induced	induced
<i>Itf</i> ACTIN17.2		induced	repressed	induced	induced
<i>Itf</i> ACTIN17.3		repressed	induced	induced	induced
<i>Itf</i> ACTIN17.4		repressed	repressed	repressed	repressed
<i>Itf</i> ACTIN17.5		repressed	repressed	repressed	repressed
<i>Itf</i> ACTIN17.6		-	-	-	-
<i>Itf</i> ACTIN20.1	GroupIV	repressed	repressed	induced	repressed
<i>Itf</i> ACTIN20.2		induced	repressed	induced	induced
<i>Itf</i> ACTIN20.3		induced	repressed	induced	induced
<i>Itf</i> ACTIN9		induced	repressed	induced	induced
<i>Itf</i> ACTIN15		induced	repressed	induced	induced
<i>Itf</i> ACTIN5.1		induced	repressed	repressed	repressed
<i>Itf</i> ACTIN5.2		induced	repressed	induced	induced
<i>Itf</i> ACTIN5.3		repressed	induced	repressed	repressed
<i>Itf</i> ACTIN5.4		induced	repressed	induced	induced
<i>Itf</i> ACTIN5.5		induced	induced	induced	induced
<i>Itf</i> ACTIN5.6		induced	repressed	repressed	repressed
<i>Itf</i> ACTIN5.7		repressed	repressed	induced	induced
<i>Itf</i> ACTIN5.8		repressed	induced	induced	repressed
<i>Itf</i> ACTIN5.9		induced	repressed	induced	induced
<i>Itf</i> ACTIN5.10		induced	repressed	induced	induced
<i>Itf</i> ACTIN12.1	GroupV	induced	induced	induced	induced
<i>Itf</i> ACTIN12.2		induced	induced	induced	repressed
<i>Itf</i> ACTIN12.3		induced	repressed	induced	induced
<i>Itf</i> ACTIN1		induced	repressed	induced	induced
<i>Itf</i> ACTIN13.1		repressed	repressed	repressed	induced
<i>Itf</i> ACTIN13.2		induced	induced	induced	induced
<i>Itf</i> ACTIN13.3		induced	induced	induced	repressed
<i>Itf</i> ACTIN10		repressed	repressed	induced	repressed
<i>Itf</i> ACTIN19.1		repressed	repressed	induced	repressed
<i>Itf</i> ACTIN19.2		repressed	repressed	induced	repressed
<i>Itf</i> ACTIN18.1	GroupVI	repressed	repressed	induced	induced
<i>Itf</i> ACTIN18.2		induced	induced	induced	induced
<i>Itf</i> ACTIN18.3		induced	induced	repressed	induced
<i>Itf</i> ACTIN18.4		repressed	repressed	induced	repressed
<i>Itb</i> ACTIN2.1	GroupI	induced	induced	induced	induced

<i>ItbACTIN2.2</i>	GroupI	repressed	repressed	repressed	repressed
<i>ItbACTIN2.3</i>		induced	repressed	induced	induced
<i>ItbACTIN2.4</i>		induced	induced	induced	induced
<i>ItbACTIN16</i>	GroupII	repressed	repressed	induced	induced
<i>ItbACTIN17.1</i>	GroupIII	induced	repressed	induced	repressed
<i>ItbACTIN17.2</i>		repressed	repressed	repressed	repressed
<i>ItbACTIN17.3</i>		repressed	induced	repressed	induced
<i>ItbACTIN17.4</i>		repressed	induced	induced	induced
<i>ItbACTIN17.5</i>		induced	induced	induced	induced
<i>ItbACTIN17.6</i>		repressed	repressed	induced	induced
<i>ItbACTIN17.7</i>		induced	repressed	repressed	repressed
<i>ItbACTIN17.8</i>		induced	repressed	repressed	repressed
<i>ItbACTIN20.1</i>	GroupIV	repressed	induced	induced	induced
<i>ItbACTIN20.2</i>		repressed	induced	induced	induced
<i>ItbACTIN9</i>		induced	repressed	induced	induced
<i>ItbACTIN15</i>		induced	repressed	induced	repressed
<i>ItbACTIN5.1</i>		induced	induced	repressed	repressed
<i>ItbACTIN5.2</i>		repressed	induced	repressed	induced
<i>ItbACTIN5.3</i>		repressed	repressed	induced	repressed
<i>ItbACTIN5.4</i>		repressed	repressed	induced	induced
<i>ItbACTIN5.5</i>		induced	repressed	repressed	induced
<i>ItbACTIN5.6</i>		repressed	induced	induced	induced
<i>ItbACTIN5.7</i>		repressed	repressed	induced	induced
<i>ItbACTIN5.8</i>		-	-	-	-
<i>ItbACTIN5.9</i>		induced	induced	repressed	induced
<i>ItbACTIN5.10</i>		repressed	induced	repressed	induced
<i>ItbACTIN5.11</i>		repressed	repressed	induced	induced
<i>ItbACTIN5.12</i>		-	-	-	-
<i>ItbACTIN5.13</i>		-	-	-	-
<i>ItbACTIN5.14</i>		induced	repressed	repressed	induced
<i>ItbACTIN5.15</i>		induced	induced	induced	repressed
<i>ItbACTIN5.16</i>		-	-	-	-
<i>ItbACTIN5.17</i>		-	-	-	-
<i>ItbACTIN12</i>	GroupV	induced	repressed	induced	induced
<i>ItbACTIN1</i>		induced	repressed	induced	induced
<i>ItbACTIN13.1</i>		induced	repressed	repressed	induced
<i>ItbACTIN13.2</i>		induced	induced	induced	induced
<i>ItbACTIN13.3</i>		repressed	repressed	induced	repressed
<i>ItbACTIN10</i>		induced	repressed	induced	induced
<i>ItbACTIN19.1</i>		repressed	induced	repressed	induced
<i>ItbACTIN19.2</i>		repressed	repressed	induced	repressed
<i>ItbACTIN19.3</i>		repressed	repressed	repressed	repressed
<i>ItbACTIN18</i>	GroupVI	induced	repressed	induced	induced

- indicates not found



**Figure S1.** Conserved motifs analysis of IbACTINs in *I. batatas*.