

**Additional file 11: Table S5.** Gene Ontology annotations of 18 upland cotton *SOD* genes.

<b>Gene name</b>	<b>Sequence ID</b>	<b>GO: Molecular function</b>	<b>GO: Biological process</b>	<b>GO: Cellular component</b>
<i>GhCSD1</i>	Gh_A13G1450	GO:0005507 : copper ion binding	GO:0042742 : defense response to bacterium	GO:0005737 : cytoplasm
		GO:0005515 : protein binding	GO:0035195 : gene silencing by miRNA	GO:0005829 : cytosol
		GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process	GO:0005576 : extracellular region
		GO:0008270 : zinc ion binding	GO:0019430 : removal of superoxide radicals	GO:0005634 : nucleus
			GO:0046688 : response to copper ion	
			GO:0010039 : response to iron ion	
			GO:0006979 : response to oxidative stress	
			GO:0010193 : response to ozone	
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
	GO:0071329 : cellular response to sucrose stimulus			
<i>GhCSD2</i>	Gh_D13G1747	GO:0005507 : copper ion binding	GO:0042742 : defense response to bacterium	GO:0005737 : cytoplasm
		GO:0005515 : protein binding	GO:0035195 : gene silencing by miRNA	GO:0005829 : cytosol
		GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process	GO:0005576 : extracellular region
		GO:0008270 : zinc ion binding	GO:0019430 : removal of superoxide radicals	GO:0005634 : nucleus
			GO:0046688 : response to copper ion	
			GO:0010039 : response to iron ion	
			GO:0006979 : response to oxidative stress	
			GO:0010193 : response to ozone	
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
	GO:0071329 : cellular response to sucrose stimulus			
<i>GhCSD3</i>	Gh_A13G0817	GO:0005507 : copper ion binding	GO:0042742 : defense response to bacterium	GO:0005737 : cytoplasm
		GO:0005515 : protein binding	GO:0035195 : gene silencing by miRNA	GO:0005829 : cytosol
		GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process	GO:0005576 : extracellular region
		GO:0008270 : zinc ion binding	GO:0019430 : removal of superoxide radicals	GO:0005634 : nucleus
			GO:0046688 : response to copper ion	
			GO:0010039 : response to iron ion	
			GO:0006979 : response to oxidative stress	
			GO:0010193 : response to ozone	
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
	GO:0071329 : cellular response to sucrose stimulus			

<i>GhCSD4</i>	Gh_D13G1062	GO:0005507 : copper ion binding	GO:0042742 : defense response to bacterium	GO:0005737 : cytoplasm
		GO:0005515 : protein binding	GO:0035195 : gene silencing by miRNA	GO:0005829 : cytosol
		GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process	GO:0005576 : extracellular region
		GO:0008270 : zinc ion binding	GO:0019430 : removal of superoxide radicals	GO:0005634 : nucleus
			GO:0046688 : response to copper ion	
			GO:0010039 : response to iron ion	
			GO:0006979 : response to oxidative stress	
			GO:0010193 : response to ozone	
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
	GO:0071329 : cellular response to sucrose stimulus			
<i>GhCSD5</i>	Gh_A11G2096	GO:0005507 : copper ion binding	GO:0055114 : oxidation-reduction process	GO:0009507 : chloroplast
		GO:0004784 : superoxide dismutase activity	GO:0019430 : removal of superoxide radicals	GO:0005576 : extracellular region
		GO:0008270 : zinc ion binding	GO:0006979 : response to oxidative stress	GO:0005573 : vacuole
			GO:0010193 : response to ozone	GO:0005577 : peroxisome
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
<i>GhCSD6</i>	Gh_D11G2412	GO:0005507 : copper ion binding	GO:0055114 : oxidation-reduction process	GO:0009507 : chloroplast
		GO:0004784 : superoxide dismutase activity	GO:0019430 : removal of superoxide radicals	GO:0005576 : extracellular region
		GO:0008270 : zinc ion binding	GO:0006979 : response to oxidative stress	GO:0005573 : vacuole
			GO:0010193 : response to ozone	GO:0005577 : peroxisome
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
<i>GhCSD7</i>	Gh_A09G2473	GO:0005507 : copper ion binding	GO:0035195 : gene silencing by miRNA	GO:0009507 : chloroplast
		GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process	GO:0009579 : thylakoid
		GO:0008270 : zinc ion binding	GO:0019430 : removal of superoxide radicals	GO:0048046 : apoplast
			GO:0046688 : response to copper ion	GO:0009750 : chloroplast stroma
			GO:0010039 : response to iron ion	
			GO:0006979 : response to oxidative stress	
			GO:0010193 : response to ozone	
			GO:0009651 : response to salt stress	
			GO:0071484 : cellular response to light intensity	
			GO:0071493 : cellular response to UV-B	
			GO:0071329 : cellular response to sucrose stimulus	

<i>GhCSD8</i>	Gh_D09G0858	GO:0005507 : copper ion binding GO:0004784 : superoxide dismutase activity GO:0008270 : zinc ion binding	GO:0035195 : gene silencing by miRNA GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0046688 : response to copper ion GO:0010039 : response to iron ion GO:0006979 : response to oxidative stress GO:0010193 : response to ozone GO:0009651 : response to salt stress GO:0071484 : cellular response to light intensity GO:0071493 : cellular response to UV-B GO:0071329 : cellular response to sucrose stimulus	GO:0009507 : chloroplast GO:0009579 : thylakoid GO:0048046 : apoplast GO:0009750 : chloroplast stroma
<i>GhCSD9</i>	Gh_A05G0722	GO:0005507 : copper ion binding GO:0004784 : superoxide dismutase activity GO:0008270 : zinc ion binding	GO:0035195 : gene silencing by miRNA GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0046688 : response to copper ion GO:0010039 : response to iron ion GO:0006979 : response to oxidative stress GO:0010193 : response to ozone GO:0009651 : response to salt stress GO:0071484 : cellular response to light intensity GO:0071493 : cellular response to UV-B GO:0071329 : cellular response to sucrose stimulus	GO:0009507 : chloroplast GO:0009579 : thylakoid GO:0048046 : apoplast GO:0009750 : chloroplast stroma
<i>GhCSD10</i>	Gh_D05G0857	GO:0005507 : copper ion binding GO:0004784 : superoxide dismutase activity GO:0008270 : zinc ion binding	GO:0035195 : gene silencing by miRNA GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0046688 : response to copper ion GO:0010039 : response to iron ion GO:0006979 : response to oxidative stress GO:0010193 : response to ozone GO:0009651 : response to salt stress GO:0071484 : cellular response to light intensity GO:0071493 : cellular response to UV-B GO:0071329 : cellular response to sucrose stimulus	GO:0009507 : chloroplast GO:0009579 : thylakoid GO:0048046 : apoplast GO:0009750 : chloroplast stroma
<i>GhFSD4</i>	Gh_D13G0600	GO:0046872 : metal ion binding GO:0005515 : protein binding GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals	GO:0009507 : chloroplast GO:0009295 : nucleoid GO:0009579 : thylakoid GO:0042646 : plastid nucleoid

<i>GhMSD1</i>	Gh_A10G1595	GO:0005507 : copper ion binding GO:0046872 : metal ion binding GO:0004784 : superoxide dismutase activity	GO:0042742 : defense response to bacterium GO:0009793 : embryo development ending in seed dormancy GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0009651 : response to salt stress GO:0010043 : response to zinc ion	GO:0005739 : mitochondrion
<i>GhMSD2</i>	Gh_D10G1852	GO:0005507 : copper ion binding GO:0046872 : metal ion binding GO:0004784 : superoxide dismutase activity	GO:0042742 : defense response to bacterium GO:0009793 : embryo development ending in seed dormancy GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0009651 : response to salt stress GO:0010043 : response to zinc ion	GO:0005739 : mitochondrion
<i>GhMSD3</i>	Gh_A05G2383	GO:0005507 : copper ion binding GO:0046872 : metal ion binding GO:0004784 : superoxide dismutase activity	GO:0042742 : defense response to bacterium GO:0009793 : embryo development ending in seed dormancy GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0009651 : response to salt stress GO:0010043 : response to zinc ion	GO:0005739 : mitochondrion
<i>GhMSD4</i>	Gh_D05G2648	GO:0005507 : copper ion binding GO:0046872 : metal ion binding GO:0004784 : superoxide dismutase activity	GO:0042742 : defense response to bacterium GO:0009793 : embryo development ending in seed dormancy GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals GO:0009651 : response to salt stress GO:0010043 : response to zinc ion	GO:0005739 : mitochondrion
<i>GhFSD1</i>	Gh_A07G0392	GO:0046872 : metal ion binding GO:0005515 : protein binding GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process GO:0009411 : response to UV	GO:0009507 : chloroplast GO:0009295 : nucleoid GO:0009579 : thylakoid
<i>GhFSD2</i>	Gh_D07G0457	GO:0046872 : metal ion binding GO:0005515 : protein binding GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process GO:0009411 : response to UV	GO:0009507 : chloroplast GO:0009295 : nucleoid GO:0009579 : thylakoid
<i>GhFSD3</i>	Gh_A13G0530	GO:0046872 : metal ion binding GO:0005515 : protein binding GO:0004784 : superoxide dismutase activity	GO:0055114 : oxidation-reduction process GO:0019430 : removal of superoxide radicals	GO:0009507 : chloroplast GO:0009295 : nucleoid GO:0009579 : thylakoid GO:0042646 : plastid nucleoid