



		MAPKKK28													
		MAPKKK38													
		MAPKKK43													
		MAPKKK46													
	MAPKKs			MKK10-5		MKK5		MKK1	MKK6						
	MAPKs	MPK16	MPK3 MPK17		MPK4		MPK7-2	MPK11 MPK20-1	MPK20-4	MPK7-1 MPK20-2 MPK20-5					
Hormone	MAPKKs	MAPKKK1	MAPKKK12	MAPKKK14	MAPKKK6	MAPKKK11	MAPKKK18	MAPKKK26	MAPKKK30	MAPKKK5	MAPKKK34	MAPKKK27	MAPKKK19	MAPKKK21	
		MAPKKK2	MAPKKK15	MAPKKK23	MAPKKK17	MAPKKK24	MAPKKK43	MAPKKK50	MAPKKK66	MAPKKK44			MAPKKK62	MAPKKK51	
		MAPKKK7		MAPKKK28	MAPKKK65	MAPKKK25			MAPKKK71	MAPKKK49			MAPKKK64	MAPKKK53	
		MAPKKK8		MAPKKK45		MAPKKK33							MAPKKK70	MAPKKK63	
		MAPKKK9		MAPKKK48										MAPKKK72	
		MAPKKK10		MAPKKK56											
		MAPKKK13		MAPKKK57											
		MAPKKK16		MAPKKK74											
		MAPKKK20													
		MAPKKK22													
		MAPKKK29													
		MAPKKK31													
		MAPKKK32													
		MAPKKK38													
		MAPKKK39													
		MAPKKK47													
		MAPKKK68													
		MAPKKK75													
		MAPKKs		MKK10-3	MKK10-1		MKK1		MKK6	MKK4 MKK5		MKK10-5	MKK3-1 MKK3-2		MKK10-2
		MAPKs	MPK4			MPK7-1	MPK11	MPK7-2	MPK16	MPK6	MPK3		MPK21-1	MPK17	

					MPK20-5	MPK14 MPK20-4		MPK20-1 MPK20-2 MPK20-3						
Heavy Metal	MAPKKs		MAPKKK3 MAPKKK8 MAPKKK11 MAPKKK13 MAPKKK18 MAPKKK26 MAPKKK36 MAPKKK48 MAPKKK50 MAPKKK61 MAPKKK66	MAPKKK10 MAPKKK19 MAPKKK20 MAPKKK32 MAPKKK35 MAPKKK37 MAPKKK45 MAPKKK51 MAPKKK52 MAPKKK58 MAPKKK67 MAPKKK69 MAPKKK71 MAPKKK72	MAPKKK25 MAPKKK57 MAPKKK63	MAPKKK28 MAPKKK42	MAPKKK1 MAPKKK22 MAPKKK29 MAPKKK30 MAPKKK34 MAPKKK39 MAPKKK40 MAPKKK41 MAPKKK49 MAPKKK53 MAPKKK64 MAPKKK74	MAPKKK16 MAPKKK27 MAPKKK31 MAPKKK4 MAPKKK73	MAPKKK14 MAPKKK44	MAPKKK60				
	MAPKKs	MKK1			MKK6	MKK5	MKK3-3 MKK10-2 MKK10-5	MKK4	MKK3-1 MKK3-2	MKK10-1 MKK10-3				
	MAPKs	MPK4 MPK11 MPK16 MPK20-1 MPK20-2 MPK20-4 MPK20-5	MPK17	MPK3 MPK6	MPK7-1 MPK20-3		MPK7-2 MPK14		MPK21-1					
Tissue	MAPKKKs	MAPKKK8 MAPKKK10	MAPKKK1 MAPKKK22	MAPKKK3 MAPKKK12	MAPKKK4 MAPKKK6	MAPKKK2 MAPKKK11	MAPKKK9 MAPKKK23							

		MAPKKK16	MAPKKK31	MAPKKK14	MAPKKK7	MAPKKK15	MAPKKK25						
		MAPKKK37	MAPKKK32	MAPKKK19	MAPKKK18	MAPKKK17	MAPKKK48						
		MAPKKK44	MAPKKK38	MAPKKK27	MAPKKK24	MAPKKK20	MAPKKK53						
		MAPKKK47	MAPKKK40	MAPKKK34	MAPKKK26	MAPKKK28	MAPKKK56						
		MAPKKK49	MAPKKK64	MAPKKK35	MAPKKK30	MAPKKK29	MAPKKK59						
		MAPKKK75		MAPKKK39	MAPKKK33	MAPKKK36	MAPKKK60						
				MAPKKK51	MAPKKK41	MAPKKK42	MAPKKK62						
				MAPKKK66	MAPKKK43	MAPKKK46	MAPKKK65						
					MAPKKK45	MAPKKK50	MAPKKK68						
					MAPKKK52	MAPKKK63	MAPKKK69						
					MAPKKK54	MAPKKK67	MAPKKK70						
					MAPKKK55	MAPKKK74							
					MAPKKK57								
					MAPKKK58								
					MAPKKK61								
					MAPKKK71								
					MAPKKK72								
					MAPKKK73								
	MAPKKs		MKK3-1 MKK3-3 MKK6 MKK10-2	MKK1 MKK3-2	MKK4 MKK5 MKK10-5	MKK10-3	MKK10-1						
	MAPKs	MPK17	MPK3 MPK6 MPK7-2 MPK14 MPK20-4	MPK4 MPK16 MPK20-1 MPK20-3	MPK7-1	MPK11 MPK20-2 MPK20-5 MPK21-1							
All	MAPKKKs	MAPKKK23 MAPKKK25	MAPKKK57 MAPKKK66		MAPKKK35 MAPKKK37		MAPKKK24 MAPKKK33	MAPKKK26 MAPKKK21 MAPKKK55	MAPKKK63 MAPKKK6				

		MAPKKK28 MAPKKK48 MAPKKK56	MAPKKK71		MAPKKK39 MAPKKK49		MAPKKK50						
	MAPKKs		MKK5	MKK6		MKK3-1 MKK3-2 MKK3-3		MKK1 MKK10-3	MKK10-5	MKK10-2			
	MAPKs	MPK4		MPK6 MPK16 MPK20-3 MPK20-4	MPK3 MPK17	MPK7-2 MPK21-1	MPK7-1 MPK20-2 MPK20-5	MPK11			MPK20-1		
All+Tissue	MAPKKKs	MAPKKK2 MAPKKK13 MAPKKK15	MAPKKK24 MAPKKK33		MAPKKK43 MAPKKK55 MAPKKK57 MAPKKK59 MAPKKK60 MAPKKK61 MAPKKK68 MAPKKK73	MAPKKK14 MAPKKK29 MAPKKK34	MAPKKK20 MAPKKK30 MAPKKK36 MAPKKK41 MAPKKK45 MAPKKK46 MAPKKK71 MAPKKK72 MAPKKK74	MAPKKK26 MAPKKK50 MAPKKK66	MAPKKK53 MAPKKK58 MAPKKK69				
	MAPKKs		MKK1	MKK6	MKK10-1		MKK5	MKK4 MKK10-3	MKK10-5				
	MAPKs	MPK4	MPK7-1 MPK20-2 MPK20-5	MPK20-1 MPK20-4		MPK16 MPK20-3 MPK21-1	MPK11						

\* The same color background indicated the same group of co-expression genes in corresponding treatment, respectively. “All” means the expression levels of all kind of treatment, and “Tissue” means the tissue specific expression. MAPKKK genes were marked in blue; MAPKK genes were marked in red; and MAPK genes were marked in cyan.