

**Ecotopic Expression of the Antimicrobial Peptide DmAMP1W Improves
Resistance of Transgenic Wheat to two Diseases: Sharp Eyespot and Common
Root Rot**

Qiang Su, Ke Wang, Zengyan Zhang*

The National Key Facility for Crop Gene Resources and Genetic Improvement, Institute of Crop
Sciences, Chinese Academy of Agricultural Sciences, Beijing 100081, China

Qiang Su: suqiangcaas@163.com

Ke Wang: wangke03@caas.cn

Zengyan Zhang: zhangzengyan@caas.cn

*** Correspondence:** Zengyan Zhang

Postal address: Institute of Crop Sciences, Chinese Academy of Agricultural Sciences,
Zhongguancun South Street12, Beijing 100081, China

Supplementary data

Supplemental Figure S1 The coding sequence and amino acid sequence of DmAMP1W. Blue part represents the signal peptide (locating no. 1-28 AA residues). Green part represents the Knot1 domain (at 30 to 78 AA). Yellow part indicates (6×) His tag.

mRNA	1	10	20	30	40	50	60														
		ATGGTGAACAGGTCCGTGGCCTTCTCCGCCTTCGTGCTCATCCTCTTCGTGCTCGCCATC																			
Amino Acid	1	M	V	N	R	S	V	A	F	S	A	F	V	L	I	L	F	V	L	A	I
		70	80	90	100	110	120														
	61	TCCGACATCGCCTCCGTGTCCGGCGAGCTCTGCGAGAAGGCCTCCAAGACCTGGTCCGGC																			
	21	S	D	I	A	S	V	S	G	E	L	C	E	K	A	S	K	T	W	S	G
		130	140	150	160	170	180														
	121	AACTGCGGCAACACCGGCCACTGCGACAACCAATGCAAGTCCTGGGAGGGCGCCGCCAC																			
	41	N	C	G	N	T	G	H	C	D	N	Q	C	K	S	W	E	G	A	A	H
		190	200	210	220	230	240														
	181	GGCGCCTGCCACGTGAGGAACGGCAAGCACATGTGCTTCTGCTACTTCAACTGCCATCAT																			
	61	G	A	C	H	V	R	N	G	K	H	M	C	F	C	Y	F	N	C	H	H
		250																			
	241	CACCATCACCATTGA																			
	81	H	H	H	H	*															

Supplemental Figure S2 Alignment of amino acid sequences of DmAMP1W and DmAMP1mature peptide (Accession: P0C8Y4). The software DANMAN was used to perform the sequence alignment.

DmAMP1_matureELCEKASKTWSGNCNT	17
DmAMP1W	MVNRSVAFSAFVLILFVLAISDIASVSGELCEKASKTWSGNCNT	45
Consensus	elcekasktwsgncnt	
DmAMP1_mature	GHCDNQCKSWEGAAGACHVRNGKHMCFYFNC.....	50
DmAMP1W	GHCDNQCKSWEGAAGACHVRNGKHMCFYFNC	83
Consensus	ghcdnqckswegaahgachvrngkhmcfcyfnc	