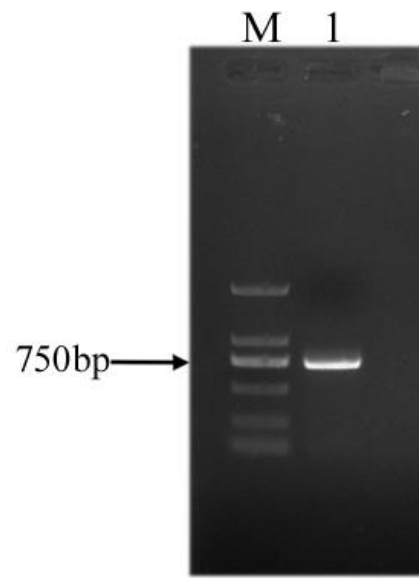


# Identification and Characterization of a Fatty Acid- and Retinoid-Binding Protein Gene (*Ar-far-1*) from the Chrysanthemum Foliar Nematode, *Aphelenchoides ritzemabosi*

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**Figure S1.** The cDNA sequence amplification results of fatty acid- and retinoid-binding gene (*Ar-far-1*) of *Aphelenchoides ritzemabosi*.

Translation of DNAMAN1{RF+1} (31-574)  
 Universal code  
 Total amino acid number: 180, MW=20369  
 Max ORF starts at AA pos 1(may be DNA pos 31) for 180 AA(540 bases), MW=20369

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1      AACCCAAGTTTGAGCAACCTCAACAAAACCATGAGTCTTCGCACATTGTTTCTTTGTTC
1      M S L R T F V S L F

61     GCGCTCTTCTGTCTTAGCTATGCAGCTACTCTTCCGTTGAGCATTTCATCAAGTGCCCGAA
11     A L F C L S Y A A T L P L S I H Q V P E

121    CAACTTAAAGAAGTTGTGCCCAGGAAGTGAAAAAATTCTATGCTGACCTCACTGAAGAA
31     Q L K E V V P E E V K K F Y A D L T E E

181    GACAAGACCATCTTAAAAGAGGTTGCTGCTAACCACGCCAGCTACGAAAACGAAGATCAA
51     D K T I L K E V A A N H A S Y E N E D Q

241    GCTATGGAAGCTCTCAAGGCAAAGAGCGAAAAACTGTTTAACAAAGCTACCGAACTTCGT
71     A M E A L K A K S E K L F N K A T E L R

301    ACTCTCTTGAAAACCAAAAATTGACTCGTTGAAACCCGATGCGAAAGCATTGTGTAAGGT
91     T L L K T K I D S L K P D A K A F V E G

361    ATCATCAACAAGGTTTCGCGCCTTGAAACCTAAGGGTGAAGAGAAGCCTGACTTAAAGAAG
111    I I N K V R A L K P K G E E K P D L K K

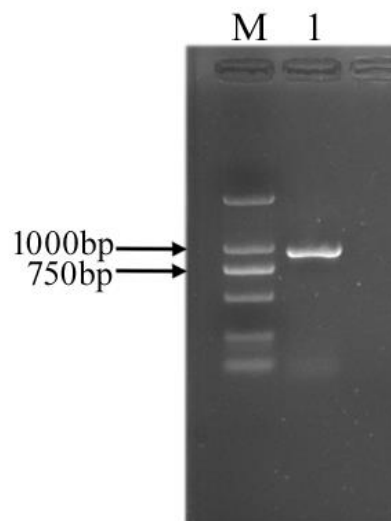
421    ATTCTGAAGTTGCTAACGAAGTCATCGACTCCTACAAAGCTTTGGGCGAAGAATCTAAA
131    I R E V A N E V I D S Y K A L G E E S K

481    CAGAACTTGCAAGAAACGTTCCCAACAATCACGAACGTTATTAAGAACGAGAAATCCAA
151    Q N L Q E T F P Q I T N V I K N E K F Q

541    ACTCTCGCTCAAGGTTTGATCAAACAAGAAAATTAACGGTCGTCGAAAACGGATAGCTT
171    T L A Q G L I K Q E N

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**Figure S2.** The amino acid sequence of fatty acid- and retinoid-binding gene (*Ar-far-1*) of *Aphelenchoides ritzemabosi*.



**Figure S3.** The DNA sequence amplification results of fatty acid- and retinoid-binding gene (*Ar-far-1*) of *Aphelenchoides ritzemabosi*.

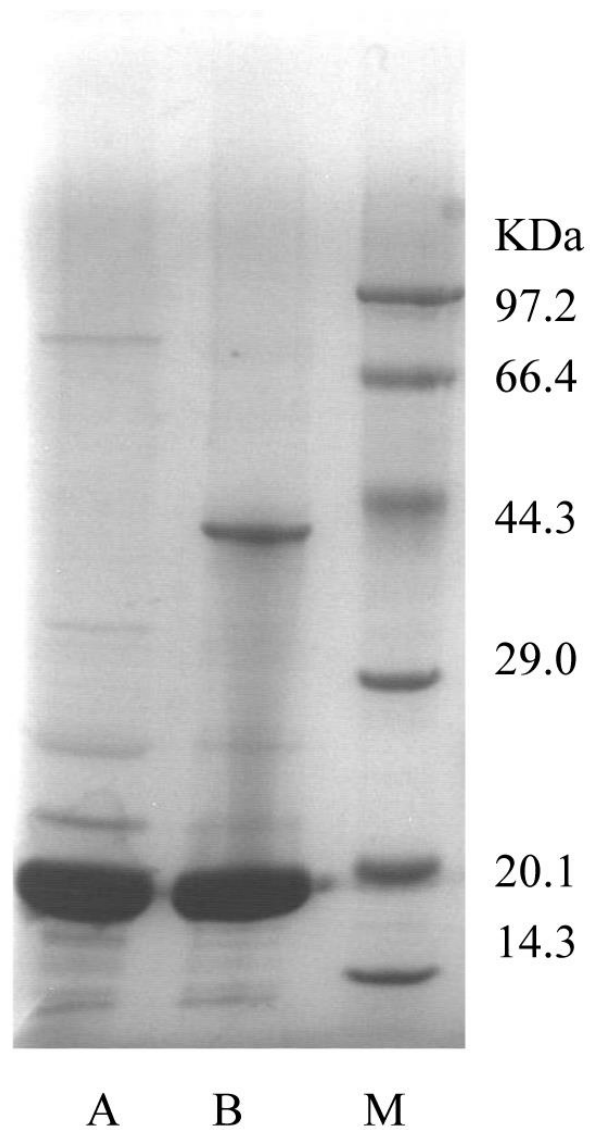
SEQ DNAMAN1: 947 bp;  
Composition 322 A; 178 C; 169 G; 278 T; 0 OTHER  
Percentage: 34.0% A; 18.8% C; 17.8% G; 29.4% T; 0.0%OTHER  
Molecular Weight (kDa): ssDNA: 292.34 dsDNA: 583.70  
ORIGIN

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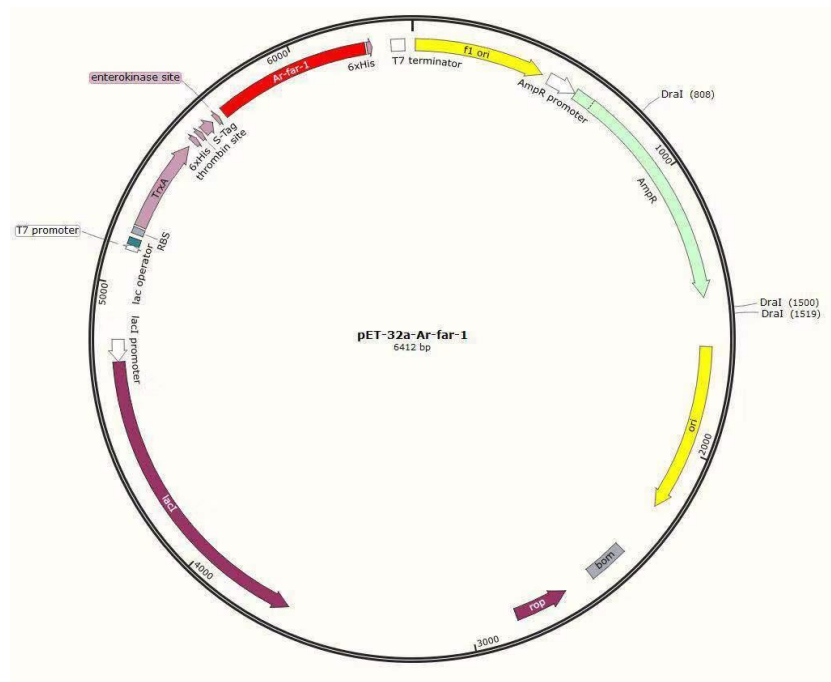
1      AACCCAAGTT TGAGCAACCT CAACAAAACC ATGAGTCTTC GCACATTCGT TTCTTTGTTC
61     GCGCTCTTCT GTCTTAGCTA TGCAGCTACT CTTCCGTTGA GCATTCATCA AGTGCCCGAA
121    CAACTTAAAG GTAAAAATCG TGATTACCAT GTTTTGTGATT GTTTTAAATT TTAGAAGTTG
181    TGCCCGAGGA AGTGAAAAAA TTCTATGCTG ACCTCACTGA AGAAGACAAG ACCATCTTAA
241    AAGAGGTTGC TGCTAACCAC GCCAGCTACG AAAACGAAGA TCAAGCTATG GAAGCTCTCA
301    AGGCAAAGAG CGAAAAACTG TTTAACAAAG CTACCGAACT TCGTACTCTC TTGAAAACCA
361    AAATTGACTC GTTGAAACCC GATGCGAAAG CATTGTGTTGA AGGTGTAAGT TTAAGTCAAT
421    TTTGCACGTA CATAATTTTA AGAATATTAG CTAGCGTGCA AAGCCAATTC AAACATATTAA
481    TTTTCAGATC ATCAACAAGG TTCGCGCCTT GAAACCTAAG GGTGAAGAGA AGCCTGACTT
541    AAAGAAGGTA TTCAATTTTG CATTAACTT ATTTTATTAA AAGAACTTT TTTAGATTCTG
601    TGAAGTTGCT AACGAAGTCA TCGACTCCTA CAAAGCTTTG GGCGAAGAAT CTAAACAGAA
661    CTTGCAAGAA ACGTTCCAC AAATCACGAA CGTTATTAAG AGTTAGTTTG CATTCTTATA
721    AAGCTTTCAA ATTTTCGATT TTTTAGACGA GAAATCCAA ACTCTCGCTC AAGGTTTGAT
781    CAAACAAGAA AATTAAACGG TCGTCGAAAA CGGATAGCTT CGACTAATTA TGTCAACAAT
841    GACCATAGTG ATTTTGTGTA TAATGTGTGT TAAAATTTTCG GATCCTTATA GTTGTGCTCG
901    TTTGTTTCGAA TAATGTCAGA TCGAAAAAAC ACGAAATAAA CTCATA

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**Figure S4.** The DNA sequence of fatty acid- and retinoid-binding gene (*Ar-far-1*) of *Aphelenchoides ritzemabosi*. The shaded parts were the locations of the four introns. The arrows and box were the positions of the primers of the southern-blot probe and the restriction enzymes *Dra* I, respectively.



**Figure S5.** Sodium dodecyl sulphate polyacrylamide gel (SDS-PAGE) of *Escherichia coli* cells expressing fatty acid- and retinoid-binding protein (*Ar-FAR-1*) and its purified protein. M: Protein Marker, A: reduced protein, B: non-reduced protein.



**Figure S6.** The map of the recombinant vector (pET-32a-Ar-far-1).