

# Characterization of Arid/Bright Transcription Factor From Chickpea Against Fusarium Wilt

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## ABSTRACT

The present study was undertaken with an aim to unravel the molecular basis of wilt susceptibility and immunity in Chickpea plants using two different cultivars showing differential reaction when infected with *Fusarium*. In order to enrich differentially expressed transcripts, SSH based libraries were constructed and were used to monitor transcript levels upon *Fusarium* infection. The ARID consensus sequence spans about 100 amino acid residues, and structural studies identify the major groove contact site as a modified helix-turn-helix motif. In Chickpea, ARID gene was isolated, cloned and found to be single copy gene and ARID protein is nuclear localized in Onion peel experiment. It is relatively a new class of transcription factor family identified in plants, and shown to express in eighteen different structures in *Arabidopsis thaliana* and also gets induced upon Rhizobium treatment in Lotus. The data has shown for the first time has shown the involvement of *CaAB* in plant immunity. The up regulation of ARID gene upon pathogen challenge shows the involvement of this gene in defense against *Fusarium*,

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