

A Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene

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CNUH1001      GCGGTATCGTCTCCGCAATGCGTAGGTTCCGCCAATTCGATTGATGCAATTATATCAAA
CNUH1002      GCGGTATCGTCTCCGCAATGCGTAGGTTCCGCCAATTCGATTGATGCAATTATATCAAA
CNUH1003      GCGGTATCGTCTCCGCAATGCGTAGGTTCCGCCAATTCGATTGATGCAATTATATCAAA
KC584142.1    GCGGTATCGTCTCCGCAATGCGTAGGTTCCGCCAATTCGATTGATGCAATTATATCAAA
*****
CNUH1001      GCTAACCGCATGCCACAGTATCGAGCACAACGACGCTGCAATTGTCCGGTGAACGACC
CNUH1002      GCTAACCGCATGCCACAGTATCGAGCACAACGACGCTGCAATTGTCCGGTGAACGACC
CNUH1003      GCTAACCGCATGCCACAGTATCGAGCACAACGACGCTGCAATTGTCCGGTGAACGACC
KC584142.1    GCTAACCGCATGCCACAGTATCGAGCACAACGACGCTGCAATTGTCCGGTGAACGACC
*****
CNUH1001      CTTTCATCGAGCCCATATGCTGTAAGCTTCCCAAGCACTCACAATACAGCCGACGCA
CNUH1002      CTTTCATCGAGCCCATATGCTGTAAGCTTCCCAAGCACTCACAATACAGCCGACGCA
CNUH1003      CTTTCATCGAGCCCATATGCTGTAAGCTTCCCAAGCACTCACAATACAGCCGACGCA
KC584142.1    CTTTCATCGAGCCCATATGCTGTAAGCTTCCCAAGCACTCACAATACAGCCGACGCA
*****
CNUH1001      TCCAAATCGGACACTAGTCTCTGGATGCGCTAGAGCTCCTTACAGGTCGAGAAATGCA
CNUH1002      TCCAAATCGGACACTAGTCTCTGGATGCGCTAGAGCTCCTTACAGGTCGAGAAATGCA
CNUH1003      TCCAAATCGGACACTAGTCTCTGGATGCGCTAGAGCTCCTTACAGGTCGAGAAATGCA
KC584142.1    TCCAAATCGGACACTAGTCTCTGGATGCGCTAGAGCTCCTTACAGGTCGAGAAATGCA
*****
CNUH1001      GGCTAACACATTACAGGCTACATGCTCAAGTATGACAGCACACAGCCAGTTCAAGGGC
CNUH1002      GGCTAACACATTACAGGCTACATGCTCAAGTATGACAGCACACAGCCAGTTCAAGGGC
CNUH1003      GGCTAACACATTACAGGCTACATGCTCAAGTATGACAGCACACAGCCAGTTCAAGGGC
KC584142.1    GGCTAACACATTACAGGCTACATGCTCAAGTATGACAGCACACAGCCAGTTCAAGGGC
*****
CNUH1001      GAGATCAAGGTTGACGGCAACAACCTGACCGTCAACGGCAAGACCATCCGTTTCCACATG
CNUH1002      GAGATCAAGGTTGACGGCAACAACCTGACCGTCAACGGCAAGACCATCCGTTTCCACATG
CNUH1003      GAGATCAAGGTTGACGGCAACAACCTGACCGTCAACGGCAAGACCATCCGTTTCCACATG
KC584142.1    GAGATCAAGGTTGACGGCAACAACCTGACCGTCAACGGCAAGACCATCCGTTTCCACATG
*****
CNUH1001      GAGAAAGACCCCGCAACATCCCATGGAGCGAGACCGCGCTTACTACGTCGTTGAGTCC
CNUH1002      GAGAAAGACCCCGCAACATCCCATGGAGCGAGACCGCGCTTACTACGTCGTTGAGTCC
CNUH1003      GAGAAAGACCCCGCAACATCCCATGGAGCGAGACCGCGCTTACTACGTCGTTGAGTCC
KC584142.1    GAGAAAGACCCCGCAACATCCCATGGAGCGAGACCGCGCTTACTACGTCGTTGAGTCC
*****
CNUH1001      ACCGGTGTTCACCAACCCGAGAAGGCCAAGGCTCACTTGAAGGTTGAGCCAAAG
CNUH1002      ACCGGTGTTCACCAACCCGAGAAGGCCAAGGCTCACTTGAAGGTTGAGCCAAAG
CNUH1003      ACCGGTGTTCACCAACCCGAGAAGGCCAAGGCTCACTTGAAGGTTGAGCCAAAG
KC584142.1    ACCGGTGTTCACCAACCCGAGAAGGCCAAGGCTCACTTGAAGGTTGAGCCAAAG
*****
CNUH1001      GTCGTATCTCTGCTCCCTCTGCCAGCAGCCCATGTTGTTATGGGTGTAACCAAGAG
CNUH1002      GTCGTATCTCTGCTCCCTCTGCCAGCAGCCCATGTTGTTATGGGTGTAACCAAGAG
CNUH1003      GTCGTATCTCTGCTCCCTCTGCCAGCAGCCCATGTTGTTATGGGTGTAACCAAGAG
KC584142.1    GTCGTATCTCTGCTCCCTCTGCCAGCAGCCCATGTTGTTATGGGTGTAACCAAGAG
*****
CNUH1001      ACTTACAAGTCCGACATCGAGGTTCTTCCCAAGCCTCTT
CNUH1002      ACTTACAAGTCCGACATCGAGGTTCTTCCCAAGCCTCTT
CNUH1003      ACTTACAAGTCCGACATCGAGGTTCTTCCCAAGCCTCTT
KC584142.1    ACTTACAAGTCCGACATCGAGGTTCTTCCCAAGCCTCTT
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B Major allergen alt a1 (alt a 1) gene

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CNUH1001      ----CTCTCTTCGCCCGCGCTGGCCTTGGCCGCGCTGCTCCTTCGAGGCCCGCCAGGGC
CNUH1002      ----CTCTCTTCGCCCGCGCTGGCCTTGGCCGCGCTGCTCCTTCGAGGCCCGCCAGGGC
CNUH1003      ----CTCTCTTCGCCCGCGCTGGCCTTGGCCGCGCTGCTCCTTCGAGGCCCGCCAGGGC
AY563307.1    GCCTCTCTTCGCCCGCGCTGGCCTTGGCCGCGCTGCTCCTTCGAGGCCCGCCAGGGC
*****
CNUH1001      AACGCATCTGCCGTGTCCACCAGGGTGAACGCTCTGGAAGATCTCCGAGTTCTAC
CNUH1002      AACGCATCTGCCGTGTCCACCAGGGTGAACGCTCTGGAAGATCTCCGAGTTCTAC
CNUH1003      AACGCATCTGCCGTGTCCACCAGGGTGAACGCTCTGGAAGATCTCCGAGTTCTAC
AY563307.1    AACGCATCTGCCGTGTCCACCAGGGTGAACGCTCTGGAAGATCTCCGAGTTCTAC
*****
CNUH1001      GGAGCCAGCCCGAAGGAACCTACTACAACAGCCTCGCCTCAACATCAAGGCCACCAAC
CNUH1002      GGAGCCAGCCCGAAGGAACCTACTACAACAGCCTCGCCTCAACATCAAGGCCACCAAC
CNUH1003      GGAGCCAGCCCGAAGGAACCTACTACAACAGCCTCGCCTCAACATCAAGGCCACCAAC
AY563307.1    GGAGCCAGCCCGAAGGAACCTACTACAACAGCCTCGCCTCAACATCAAGGCCACCAAC
*****
CNUH1001      GGAGGAACCTCGATTACCTGCTGCTTCGGCCGACAAGCTTGAGGATGCAAGTGG
CNUH1002      GGAGGAACCTCGATTACCTGCTGCTTCGGCCGACAAGCTTGAGGATGCAAGTGG
CNUH1003      GGAGGAACCTCGATTACCTGCTGCTTCGGCCGACAAGCTTGAGGATGCAAGTGG
AY563307.1    GGAGGAACCTCGATTACCTGCTGCTTCGGCCGACAAGCTTGAGGATGCAAGTGG
*****
CNUH1001      TACCCTTGCACAAAGGCAACTTCATGGAGTTCTCTTCGACAGGACCCGAGCGGTCTG
CNUH1002      TACCCTTGCACAAAGGCAACTTCATGGAGTTCTCTTCGACAGGACCCGAGCGGTCTG
CNUH1003      TACCCTTGCACAAAGGCAACTTCATGGAGTTCTCTTCGACAGGACCCGAGCGGTCTG
AY563307.1    TACCCTTGCACAAAGGCAACTTCATGGAGTTCTCTTCGACAGGACCCGAGCGGTCTG
*****
CNUH1001      CTCTGAAGCAGAAGGTCAGCGACGAGTAAGTTATCCTCATGCCGTGCTACTACTATAC
CNUH1002      CTCTGAAGCAGAAGGTCAGCGACGAGTAAGTTATCCTCATGCCGTGCTACTACTATAC
CNUH1003      CTCTGAAGCAGAAGGTCAGCGACGAGTAAGTTATCCTCATGCCGTGCTACTACTATAC
AY563307.1    CTCTGAAGCAGAAGGTCAGCGACGAGTAAGTTATCCTCATGCCGTGCTACTACTATAC
*****
CNUH1001      ATTCGATATACTAATCTCTTCAGCATCATCTATTTCGCTACCGCCACTCTCCCAAC
CNUH1002      ATTCGATATACTAATCTCTTCAGCATCATCTATTTCGCTACCGCCACTCTCCCAAC
CNUH1003      ATTCGATATACTAATCTCTTCAGCATCATCTATTTCGCTACCGCCACTCTCCCAAC
AY563307.1    ATTCGATATACTAATCTCTTCAGCATCATCTATTTCGCTACCGCCACTCTCCCAAC
*****
CNUH1001      TACTGCCACGCCGGGTAACGGCCCTCAGGACTTTGTCTGCCAGGGTGTCTCC
CNUH1002      TACTGCCACGCCGGGTAACGGCCCTCAGGACTTTGTCTGCCAGGGTGTCTCC
CNUH1003      TACTGCCACGCCGGGTAACGGCCCTCAGGACTTTGTCTGCCAGGGTGTCTCC
AY563307.1    TACTGCCACGCCGGGTAACGGCCCTCAGGACTTTGTCTGCCAGGGTGTCTCC
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Supplementary Fig. 1. Comparison of the nucleotide sequence of the glyceraldehyde-3-phosphate dehydrogenase (GAPDH) gene and major allergen alt a1 (Alt a 1) gene. Multiple sequence alignments of GAPDH gene (A) and Alt a 1 gene (B) of *Alternaria sonchi* strains CNU1001-3 and *A. sonchi* KC584142.1 type strain. Asterisks (*) indicate identical nucleotides and mismatched nucleotides are highlighted.