***gorab[1]* deletion allele**

* generated by CRISPR/Cas9 using two gRNAs against PAMs at 17428874-17428872 (5’ PAM) and 17427268-17427270 (3’ PAM)
* 475 bp deletion between 17428804-17428330; there is 2 bp (5’-AA-3’) insertion between the breakpoints instead of the deleted sequence
* there is an additional 3 bp deletion close to the 3’ PAM, at the position 17427276-17427274.

Note, that all *5’* and *3’* indications above are relative to the *Gorab* gene

The deletion fragments are highlighted in red in the sequence bellow (the source of the sequence is: Gorab extended gene region; 3L:complement, 17425305..17430836).

TATCTTTTAAATGGTGACTACTCATTTATCCAAAGAAACAACAATGACGACATTGAATCGGGCATAAAGCGGCAGAATGAGGTGCTAGTGCCCCGGCAGCACTTTGTTTGGGTTATTTTGGGAGCCCGCAATATATGATGGGCGGTGGTGAAGTGAGGGATTCGGAGTGGGGACAGGTAATGAGGAAGCCGAAACAGGTTTGCACAGACTTAGCCGTGCGGTGAGGTAAATTGTTAGTCAGCATCAGCCCCGACCGCGTACCCACATTATGGACAAATTGTTTGCTCATATTCGCCGCTATTGAAAGTGGGCACGTACATACGTACGTATGGCTCGAGGGACCAGCTTTAACCGAAGACAGGTAGTCAGGGTCATGTTTGTGTGCGACGATGATGATGATGATAATAATAATGTAATGATGATGATGCCGACGATCGTGCTGATAAGGTCACCACCGGGTGCACCTCCCCATATCTCCTCTATGAATCCACAGATCATCATGATGCAACGCTGTTTGCGTCTCCAAAAGCCGCTGGCCCTACGACGAGGCCTTCGCTTGGCCCAGGCTAATAGCCAAGCGGTGGCCACAGAAGCACCCGAGGCGGAACCTCTGGATGCCTTCGAGCGTCAGTACCTCAAGGAGCGAATCGAGATATCGCCCTTCCAGCGGCTGTTCCTGGGGGCAGGATCCTCCATTGCCGCGCTCTTGAATCCAAGACGGTAGGGCATCTGATGAAATTTAAAAATCTCTTAAAACTCTTAATTATTATTATGAAGTCATGACATGATCGCCTGTTTGGGTGAGACGACTGGAGAGGATGCTCTATGGACAATTTTGGACACCATGCAAGCCAGCGAGGAGGGTCAGCGCATCATGGCTGATAAGCCCCGCATCCACACCAGCACCATTGACTTCAAGTATCTGGAAACTTTGCCACCGGATACCTTTGGAGCCGCTTACGTAAAGTTTCTGAAAGATAATGTAAGTAGTTCAAAGAATCCGGTAAGAAAAAGCGTTAGTAACCATAAAACGACGAAAATCTGGTTCAAAGACATTCCTAAGAGAATTTGGACAGTGAATGTCATGGTCGAATTTGAAGTTGGTAACAATTGAAAATCTTAAAAATTATTGTCTCATAAACATACTTGCATATAAAAGATATATTTAGATGGAAAATAAAATAATAATTGCTTTTGTCCATCGCTTCAACGATTATTTTGGTAATCAATTTTCAGCAAGTCACGCCGGACAGTCGCATGGCCGTGCGGTTTTTGGAGGACCCGAAGTTGGCCTACTTGATGACGCGATATCGCGAATGCCACGACCTAATCCACACGGTGCTGGACATGCCCACCAATATGCTGGGCGAGGTGGCTGTCAAGTGGGTGGAGGCTCTGAACACGGGCCTGCCCATGTGCTACGGTGGTGCGGTATTCGGAGCAGTTCGCCTACGTCCCAAGTGAGTTCAGTGAACTGGGTTCTCTAATTATAGCTCCCCATTCACGCGTTTGTTTATTTTCTCCTCCACTTAGGCAGCGGCGTGCGTACTTGAAGCATTACTTGCCGTGGGCCCTGGAGAACGGCAAGCGGACCAAGCCCTTGATGCCCGTCTACTGGGAGAAGCGCTGGGAGCAGAACATCCACGAGCTGCGCTCCGAATTGGGCATTACTGTGCTGAATAAAGCTTGATAAGGCTGTTTATTTTTAAGCCCATTTTTAAATTTTGAACTTATCGACTATTAGTATCGAGCAGTCCTATCGCGATCGTAGAATTGTGATCTGGCAACGTCGTGTAACGTCGAACTGATTGTAGATGTTTCCACTTACAAAGAAAATTATTATTTGATTATAGCAATAAATATAAAAGTTGATGCAGTTTGCCGAAATAATTTAAAGATCGAGAAAAAAACTTTATATTATTTTTTATATTAGAATTTGAGCACAGTGAGAACAGTCAATTTCCGCGAATGATCGCATCAAAACTTAACCCGATGTGGCAACTCCACTCGTTCTGTTTGCATTTGCTGATGTGTTGTTTTGTTTTTTTCGGTCGATCGTCTTAATGGCTAATTATCCCTAAGTTAAACACCATGACTGAGAAATTCAATGGTTTTAGCCACGACGAGATCCTCAAGATAACGGGCGTGAAGGAGGGCGGTGTGGGCAAAAGGCCTGCGAGTCTGGAAGCAGGTTAGATCACTAAGCATGAACCCCAAAGCGTGTAAACAATTATCTGTTTATAATAAAAACCTTTGCCTATGTGTGCGTGAGCAGCGAAGCCGGCGCTCCGAATTCAACCCGGCATTCGGCGTATGCCCGATAAGATCTTCCGGCAAGCGGATCAGTTACGGAAGCAGCAGCAGCAGCAACCACAGCAACCCATACAAAAACCGGATGTGGCGAAGAAGACCAAATCGGGAACAGCGACTCCCACGGAAAAGCCACCGACTCCCACTCCCGCGGCGGAGGATGACGTAGCGAACGGATCGCTAAATTTGGACCGCCCACTCTCCGATTCATTAATAGAGGCACTCTACCATGGAAATGCTACAGCTAGAGATAAGAAAACTCCCGCCACGTATGCAGATGCTGAAACAACGTCCACCGACGACAGTTCGATTCTGAAGATCAGCGGCGGTGACAGCCAGACAACTAGCTCCACCGATGATGGCAGCATCCTGCCGAGTACCCAGGACACCTCGCCGCGGGAGCGCCTCAACACAGACTCACCTTTCAAGGGCATCTCGCTGAAGGACTTCGAACAGCATCGCCGCATGATCGAGGAGCAGAACAAGCAGAAGAAGCAAATGCTGTACCAGGCCATCGAGCAGCACACCCAGAAGACGGCGGCGGAGTCGCGAAAGATCGAGGAGATCCGCCACGAGCTGTCCAAGCTGGAAAGTGATCTGGCCGTGGACGTAGCTCTGCTGAGGAAGCAGATCGACAATGCCTGCATACATTTTGCCAATGTAGAGTAAGTGGCGAAGCCAAATACTTGTGTGTTTCCCTTATTAATATTTATGTTACACAGAAAACAATACGTCAAAATCGAGGCTCAGTTCTTGCGGGCCAAGATAGAGCTGCACAATGCATCCGAAAAGAAGGAGCTGCTCACAGAGCATCTATGCACAGTAATTGCCCACAACGAGGACCGTAAAGCGCAAAAGCTTACTGAATTGATGCAGAAAGTGGGTCTGTCGCCAACCGATGATTGCCAACCGATTGATTTAACTCAACAAAGCCCCTAAACACGTAACACGTGTAAATTCAACTTCAAATCATCTTTAATTCGAATTTTCAGCGGTGTTTGCTTAACTTGACCAAAAGTATCAATTTGTTGCTCCCTGAAATATTATATTTTTTAAATTGGAAAATTATGTACTAATTTTCCATCGGCTATATTGTATTGGAATTGTAAACATAAAACACGCCTGAAATATGTCGAATGCGCTCTAATATTAGCATGTAATTAATGTTCATAGCCTAAGTGATGAAGTGCAAATTGCAAATAAAATATGTATATGTTATGTGTAAAATTAAAGTGTAATTACTGAAACTGAGTAGTTGGAACTGCGACCTAAATAAAAATAAGGGTATTAAAAAGCGAACATTCTTCAATAATGTTATTGTTTGGCTTTGACTATGTGGCAACACCGTTAGCTGCGGCAACAGCTGATCGTTTTCAGAGTTTAATAAACGTGCAAGCTGAACAATACAATCGGAAATAAGTGTTTCTAAACAGAATACAATAAATTAAGCATTTATAATGGCAGGCCGCGGAAGGGGCGGCAAGACAGGCACCCTCACGGCGGAGCAAATGGCCATGTTGGGATGCACAAAGGATATGCCGGTGCAGACGGCGCCGCCACCTACATTTCCGCCTGTTTTGAACAGACCCACTACCCTAGAAGTGGGTACAAATCCATTTACATTAGTTTAAAAAACATCGATCAACTTTTTACCTGTTTTACTTCGATAGACAACAGCCACACAGAACTATCAGCTCCTGTGGAAGGAGGACTTTCTGAACCGAATGCGAGATTCCCCCTATTACATGATCTCCGCCAGTCGGGACGCAAAAAACCTTGATCACAAGGACTGGCGAGAAGTAATAATACTGGCTATTTTAAATTAGCTGCTTATAATCCTGCTTTTACACCCCCAGAAAGCCATGGAGCGCATGAAGCTCACAGCACAACCCGATTTTAACTACAAAGCCATGCCCCAAGAGCTAAACATCTCCAGTCGAAAACGTCGTGGAGCAGATGCAAGGCCGAATCTGCTGACCAAGAAGACAAACATCGAGGACAGACTGAAGGTTCTGGAGCAGAAAGAACTGAAATCAGGTGGCGGTGAGCAGGACGAGAACAAACAAGAGTCCGATTCCGAACAGGAGGAGGAGGAAGATCCGGAGGCGGCGTTGGATGATGAGATGGACGAGGACAACGACTACGGTGCAACGTACTTTGATAATGGAGAAGCCTTCAATGATGAGGACGACAACTTGGACGATGGTCCCGTTTACTGAGACAAATAAAACCATCGAACTGATTACTTTCGGATCTGTGATTTACTATGTCGCCACTTTAAGCTTATTTAACACAAATGTTGGATTAATTTACACGTAAGGGAACGCTGGCTTAGTCCAGGCTCTTGGGCGCGTAGTAGTTGAAGTGGATGATACCAGAAGATTTCACCTGCAAAGCGTATTTCAATAAGACCGATATGGGATGGAAGGAATATGGCAGCCACTTACGAATCCAATAGTGCCGGCCAGGACGAGAATGCCAGTGATGAGCGCGGCATTGTACTTGGCGTTCTTCTGGCTGTGCTGCTCCTTCCAGTCTCCAGCGGGCACGGGCAGATCGTTCATGGTGGAGTGGGGACCATGTCCACCGTGGTAAGCGGCACGCGACAAAGCGCCAGCTGAAATGAGAGAACAAGAAAGAATATTCAAGTGATTGGTTTTAAAAAGGGGGTAATCCCAACGAAATGCAACTTGGTTAATGATCTCATCCAAGTTTCTTCCGATATCTGTTTGGCTAATTCTGATAATATCCATGGCTATGCTGAAGATTGGTGGGTGAACCATTCCTTCGCAGTTCCTTGAAGTTTCTCCCTTTGCTTATCCACATTATGTAATTTTTAAGGTTAGCAGTTTTGCTGAAAAGAGGTGTTGGGCCACTCCAACTCACCGTTCTTGAGCAGAAGCCCCTGCTTGACAATGTGCTTAACCAACATGATTGCTCGAAAGTAGCTGGAAATGGGTAAATATGGGTTTATTTTCACTGCCAATACTTTTTCGCATTATAACTCACCCGAAGATTACCTTGTGTTGAACAGTGTGACCGTTGTGTTGTTATAGAATAATATCTACCCTACAGTTGGGATGAGATCACGAGCTGCATACTTGTTATTACCTACGATGCGATGAAACCTTCAATGTATCTATTATACTGAAATGTTTAAATAACAATATGATTTAATACATTTTAATTGGTTTCTGTAGTCTTAGCATATTTTTGCTATGT

***gorab[2]* deletion allele**

* generated by CRISPR/Cas9 using two gRNAs against PAMs at 17428874-17428872 (5’ PAM) and 17427766- 17427764 (3’ PAM)
* 1168 bp deletion between 17428907- 17427740; there is 11 bp (5’- AAAGCAGCTAT -3’) insertion between the breakpoints instead of the deleted sequence

Note, that all *5’* and *3’* indications above are relative to the Gorab gene

The deletion fragments are highlighted in red in the sequence bellow (the source of the sequence is: Gorab extended gene region; 3L:complement, 17425305..17430836).

TATCTTTTAAATGGTGACTACTCATTTATCCAAAGAAACAACAATGACGACATTGAATCGGGCATAAAGCGGCAGAATGAGGTGCTAGTGCCCCGGCAGCACTTTGTTTGGGTTATTTTGGGAGCCCGCAATATATGATGGGCGGTGGTGAAGTGAGGGATTCGGAGTGGGGACAGGTAATGAGGAAGCCGAAACAGGTTTGCACAGACTTAGCCGTGCGGTGAGGTAAATTGTTAGTCAGCATCAGCCCCGACCGCGTACCCACATTATGGACAAATTGTTTGCTCATATTCGCCGCTATTGAAAGTGGGCACGTACATACGTACGTATGGCTCGAGGGACCAGCTTTAACCGAAGACAGGTAGTCAGGGTCATGTTTGTGTGCGACGATGATGATGATGATAATAATAATGTAATGATGATGATGCCGACGATCGTGCTGATAAGGTCACCACCGGGTGCACCTCCCCATATCTCCTCTATGAATCCACAGATCATCATGATGCAACGCTGTTTGCGTCTCCAAAAGCCGCTGGCCCTACGACGAGGCCTTCGCTTGGCCCAGGCTAATAGCCAAGCGGTGGCCACAGAAGCACCCGAGGCGGAACCTCTGGATGCCTTCGAGCGTCAGTACCTCAAGGAGCGAATCGAGATATCGCCCTTCCAGCGGCTGTTCCTGGGGGCAGGATCCTCCATTGCCGCGCTCTTGAATCCAAGACGGTAGGGCATCTGATGAAATTTAAAAATCTCTTAAAACTCTTAATTATTATTATGAAGTCATGACATGATCGCCTGTTTGGGTGAGACGACTGGAGAGGATGCTCTATGGACAATTTTGGACACCATGCAAGCCAGCGAGGAGGGTCAGCGCATCATGGCTGATAAGCCCCGCATCCACACCAGCACCATTGACTTCAAGTATCTGGAAACTTTGCCACCGGATACCTTTGGAGCCGCTTACGTAAAGTTTCTGAAAGATAATGTAAGTAGTTCAAAGAATCCGGTAAGAAAAAGCGTTAGTAACCATAAAACGACGAAAATCTGGTTCAAAGACATTCCTAAGAGAATTTGGACAGTGAATGTCATGGTCGAATTTGAAGTTGGTAACAATTGAAAATCTTAAAAATTATTGTCTCATAAACATACTTGCATATAAAAGATATATTTAGATGGAAAATAAAATAATAATTGCTTTTGTCCATCGCTTCAACGATTATTTTGGTAATCAATTTTCAGCAAGTCACGCCGGACAGTCGCATGGCCGTGCGGTTTTTGGAGGACCCGAAGTTGGCCTACTTGATGACGCGATATCGCGAATGCCACGACCTAATCCACACGGTGCTGGACATGCCCACCAATATGCTGGGCGAGGTGGCTGTCAAGTGGGTGGAGGCTCTGAACACGGGCCTGCCCATGTGCTACGGTGGTGCGGTATTCGGAGCAGTTCGCCTACGTCCCAAGTGAGTTCAGTGAACTGGGTTCTCTAATTATAGCTCCCCATTCACGCGTTTGTTTATTTTCTCCTCCACTTAGGCAGCGGCGTGCGTACTTGAAGCATTACTTGCCGTGGGCCCTGGAGAACGGCAAGCGGACCAAGCCCTTGATGCCCGTCTACTGGGAGAAGCGCTGGGAGCAGAACATCCACGAGCTGCGCTCCGAATTGGGCATTACTGTGCTGAATAAAGCTTGATAAGGCTGTTTATTTTTAAGCCCATTTTTAAATTTTGAACTTATCGACTATTAGTATCGAGCAGTCCTATCGCGATCGTAGAATTGTGATCTGGCAACGTCGTGTAACGTCGAACTGATTGTAGATGTTTCCACTTACAAAGAAAATTATTATTTGATTATAGCAATAAATATAAAAGTTGATGCAGTTTGCCGAAATAATTTAAAGATCGAGAAAAAAACTTTATATTATTTTTTATATTAGAATTTGAGCACAGTGAGAACAGTCAATTTCCGCGAATGATCGCATCAAAACTTAACCCGATGTGGCAACTCCACTCGTTCTGTTTGCATTTGCTGATGTGTTGTTTTGTTTTTTTCGGTCGATCGTCTTAATGGCTAATTATCCCTAAGTTAAACACCATGACTGAGAAATTCAATGGTTTTAGCCACGACGAGATCCTCAAGATAACGGGCGTGAAGGAGGGCGGTGTGGGCAAAAGGCCTGCGAGTCTGGAAGCAGGTTAGATCACTAAGCATGAACCCCAAAGCGTGTAAACAATTATCTGTTTATAATAAAAACCTTTGCCTATGTGTGCGTGAGCAGCGAAGCCGGCGCTCCGAATTCAACCCGGCATTCGGCGTATGCCCGATAAGATCTTCCGGCAAGCGGATCAGTTACGGAAGCAGCAGCAGCAGCAACCACAGCAACCCATACAAAAACCGGATGTGGCGAAGAAGACCAAATCGGGAACAGCGACTCCCACGGAAAAGCCACCGACTCCCACTCCCGCGGCGGAGGATGACGTAGCGAACGGATCGCTAAATTTGGACCGCCCACTCTCCGATTCATTAATAGAGGCACTCTACCATGGAAATGCTACAGCTAGAGATAAGAAAACTCCCGCCACGTATGCAGATGCTGAAACAACGTCCACCGACGACAGTTCGATTCTGAAGATCAGCGGCGGTGACAGCCAGACAACTAGCTCCACCGATGATGGCAGCATCCTGCCGAGTACCCAGGACACCTCGCCGCGGGAGCGCCTCAACACAGACTCACCTTTCAAGGGCATCTCGCTGAAGGACTTCGAACAGCATCGCCGCATGATCGAGGAGCAGAACAAGCAGAAGAAGCAAATGCTGTACCAGGCCATCGAGCAGCACACCCAGAAGACGGCGGCGGAGTCGCGAAAGATCGAGGAGATCCGCCACGAGCTGTCCAAGCTGGAAAGTGATCTGGCCGTGGACGTAGCTCTGCTGAGGAAGCAGATCGACAATGCCTGCATACATTTTGCCAATGTAGAGTAAGTGGCGAAGCCAAATACTTGTGTGTTTCCCTTATTAATATTTATGTTACACAGAAAACAATACGTCAAAATCGAGGCTCAGTTCTTGCGGGCCAAGATAGAGCTGCACAATGCATCCGAAAAGAAGGAGCTGCTCACAGAGCATCTATGCACAGTAATTGCCCACAACGAGGACCGTAAAGCGCAAAAGCTTACTGAATTGATGCAGAAAGTGGGTCTGTCGCCAACCGATGATTGCCAACCGATTGATTTAACTCAACAAAGCCCCTAAACACGTAACACGTGTAAATTCAACTTCAAATCATCTTTAATTCGAATTTTCAGCGGTGTTTGCTTAACTTGACCAAAAGTATCAATTTGTTGCTCCCTGAAATATTATATTTTTTAAATTGGAAAATTATGTACTAATTTTCCATCGGCTATATTGTATTGGAATTGTAAACATAAAACACGCCTGAAATATGTCGAATGCGCTCTAATATTAGCATGTAATTAATGTTCATAGCCTAAGTGATGAAGTGCAAATTGCAAATAAAATATGTATATGTTATGTGTAAAATTAAAGTGTAATTACTGAAACTGAGTAGTTGGAACTGCGACCTAAATAAAAATAAGGGTATTAAAAAGCGAACATTCTTCAATAATGTTATTGTTTGGCTTTGACTATGTGGCAACACCGTTAGCTGCGGCAACAGCTGATCGTTTTCAGAGTTTAATAAACGTGCAAGCTGAACAATACAATCGGAAATAAGTGTTTCTAAACAGAATACAATAAATTAAGCATTTATAATGGCAGGCCGCGGAAGGGGCGGCAAGACAGGCACCCTCACGGCGGAGCAAATGGCCATGTTGGGATGCACAAAGGATATGCCGGTGCAGACGGCGCCGCCACCTACATTTCCGCCTGTTTTGAACAGACCCACTACCCTAGAAGTGGGTACAAATCCATTTACATTAGTTTAAAAAACATCGATCAACTTTTTACCTGTTTTACTTCGATAGACAACAGCCACACAGAACTATCAGCTCCTGTGGAAGGAGGACTTTCTGAACCGAATGCGAGATTCCCCCTATTACATGATCTCCGCCAGTCGGGACGCAAAAAACCTTGATCACAAGGACTGGCGAGAAGTAATAATACTGGCTATTTTAAATTAGCTGCTTATAATCCTGCTTTTACACCCCCAGAAAGCCATGGAGCGCATGAAGCTCACAGCACAACCCGATTTTAACTACAAAGCCATGCCCCAAGAGCTAAACATCTCCAGTCGAAAACGTCGTGGAGCAGATGCAAGGCCGAATCTGCTGACCAAGAAGACAAACATCGAGGACAGACTGAAGGTTCTGGAGCAGAAAGAACTGAAATCAGGTGGCGGTGAGCAGGACGAGAACAAACAAGAGTCCGATTCCGAACAGGAGGAGGAGGAAGATCCGGAGGCGGCGTTGGATGATGAGATGGACGAGGACAACGACTACGGTGCAACGTACTTTGATAATGGAGAAGCCTTCAATGATGAGGACGACAACTTGGACGATGGTCCCGTTTACTGAGACAAATAAAACCATCGAACTGATTACTTTCGGATCTGTGATTTACTATGTCGCCACTTTAAGCTTATTTAACACAAATGTTGGATTAATTTACACGTAAGGGAACGCTGGCTTAGTCCAGGCTCTTGGGCGCGTAGTAGTTGAAGTGGATGATACCAGAAGATTTCACCTGCAAAGCGTATTTCAATAAGACCGATATGGGATGGAAGGAATATGGCAGCCACTTACGAATCCAATAGTGCCGGCCAGGACGAGAATGCCAGTGATGAGCGCGGCATTGTACTTGGCGTTCTTCTGGCTGTGCTGCTCCTTCCAGTCTCCAGCGGGCACGGGCAGATCGTTCATGGTGGAGTGGGGACCATGTCCACCGTGGTAAGCGGCACGCGACAAAGCGCCAGCTGAAATGAGAGAACAAGAAAGAATATTCAAGTGATTGGTTTTAAAAAGGGGGTAATCCCAACGAAATGCAACTTGGTTAATGATCTCATCCAAGTTTCTTCCGATATCTGTTTGGCTAATTCTGATAATATCCATGGCTATGCTGAAGATTGGTGGGTGAACCATTCCTTCGCAGTTCCTTGAAGTTTCTCCCTTTGCTTATCCACATTATGTAATTTTTAAGGTTAGCAGTTTTGCTGAAAAGAGGTGTTGGGCCACTCCAACTCACCGTTCTTGAGCAGAAGCCCCTGCTTGACAATGTGCTTAACCAACATGATTGCTCGAAAGTAGCTGGAAATGGGTAAATATGGGTTTATTTTCACTGCCAATACTTTTTCGCATTATAACTCACCCGAAGATTACCTTGTGTTGAACAGTGTGACCGTTGTGTTGTTATAGAATAATATCTACCCTACAGTTGGGATGAGATCACGAGCTGCATACTTGTTATTACCTACGATGCGATGAAACCTTCAATGTATCTATTATACTGAAATGTTTAAATAACAATATGATTTAATACATTTTAATTGGTTTCTGTAGTCTTAGCATATTTTTGCTATGT