

# Frequency of *iucD*, *tsh*, and *iss* genes among *Escherichia coli* isolates in broilers infected with colibacillosis

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## Abstract

*Escherichia coli* (*E. coli*) is component of the normal flora of the human intestine, mammals and birds, however, some strains of *E. coli* due to have virulence factors, are pathogenic. The aim of the current study was to determine the frequency of *iucD*, *tsh*, and *iss* genes in broiler flocks infected with colibacillosis in east Azarbaijan-Iran. One Hundred and seventeen *E. coli* isolates from colibacillosis infected broilers with pericarditis, perihepatitis, and air sacculitis investigated. First, standard screening tests and culture was done, and then standard primers and PCR was used for genotype evaluation of isolates in regard of *iucD*, *tsh*, and *iss* genes. In 29 samples (24.78%) all genes (*iucD*, *iss*, and *tsh*) was positive, and 29 (24.78%), 39 (33.33%), and 44 (37.60%) of samples was positive in regard of dual combinations of genes *tsh/iss*, *tsh/iucD*, and *iss/iucD*, respectively. In addition, 34.18%, 37.60%, and 91.45% of isolates possess *tsh*, *iss*, and *iucD*, respectively. Our results indicated which higher percent of evaluated isolates have the ability to produce aerobactin, and the various combination of genes seen in 24.785 to 37.60% of isolates. It seems more investigation needed to the evaluation of virulence factors of east Azarbaijan broilers.

**Keywords:** *Escherichia coli*, Colibacillosis, *tsh* gene, *iss* gene, *iucD* gene

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