

Supplementary material

***Rhizobium leguminosarum* HupE is a highly-specific diffusion facilitator for nickel uptake**

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Table S1: Oligonucleotides used in this study

Figure S1: Detection of wild-type and mutated forms of HupE in *E. coli*

Table S1. Primers used in this work

Primer	Sequence (5'-3')
HupE_D42_F	GCGGCCTGAATCATATCCTGGCGATGGT
HupE_D42_R	ACCATCGCCAGGATATGATTGAGGCCGC
HupE_E90_F	CCGATGGTCCAAACTGCAATCGCGCTGA
HupE_E90_R	GCGCGATTGCAGTTTGGACCATCGGCAG
HupE_F69_F	TCGTGCCCTCCGCCGCCGTCATCGTCAT
HupE_F69_R	ATGACGATGACGGCGGGAGGGCACGA
HupE_E133_F	GCATCCAGTTGCCGACAATGTCAAACGC
HupE_E133_R	GCGTTTGACATTGTCTGGCAACTGGATGC
EChupE1-Kpn	GGTACCAGGAGGAATTCACCATGAAGTATAG TAAGAT
pN35-X	AAATCTAGAGTTGAGACCCGCAAGCG
pT56-X	AAATCTAGACGTCGAGGCCCAGAAGC
pK60-X	AAATCTAGACTTGCCGCCCAGCGTCG
pE82-X	AAATCTAGACTCGATACCCAGGACGC
pE107-X	AAATCTAGACTCGAAGGCCACCAGCA
pI110-X	AAATCTAGAAATCTTCACCTCGAAGG
pF125-X	AAATCTAGAGAAGAGCGCGCATATGC
pL134-X	AAATCTAGACAACTCGATGCCATGGA
pA140-X	AAATCTAGACGCGTTTGACATTGTCG
pR165-X	AAATCTAGACCTCAGCGAAGCCAGCC
pK168-X	AAATCTAGATTTGCCGAACCTCAGCG
pL188-X	AAATCTAGACAGTGCCGCGCCGGCCA
pG191-X	AAATCTAGAGCCGACCAGCAGTGCCG

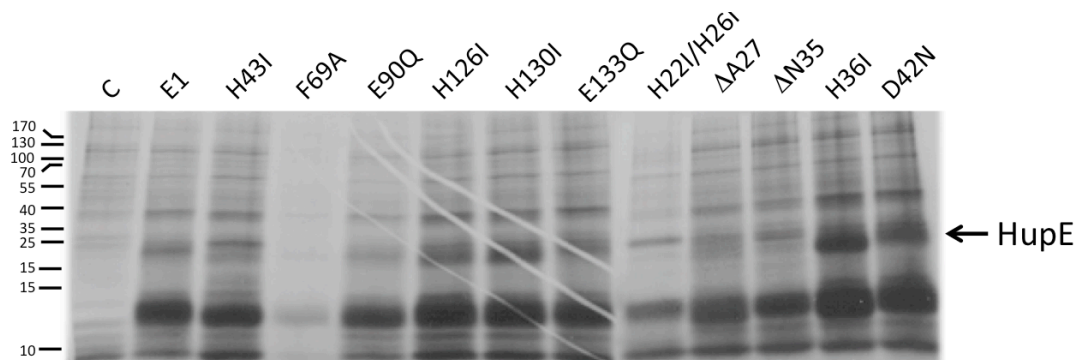


Figure S1. Detection of wild type and mutated forms of HupE in *E. coli*. The picture is an autoradiogram of a gel containing extracts of ^{35}S -labelled *E. coli* cells expressing HupE protein (E1) or HupE variants with the indicated site-directed mutations. Lane labelled as C corresponds to a negative control of *E. coli* cells bearing the pBAD18-km vector with no insert. The position of HupE is shown on the right margin. Marks at the left of the gel indicate the position of molecular size markers of the indicated size. The gel contained 12.5% acrylamide and 6M urea. For unknown reasons the 15 kDa marker gave two separate bands.