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| **Process** | **gene** | **KO** | **Linked taxa** |
| Fixation | nitrogenase (*nif*D) (*nif*H) (*nif*K) | K02586  K02588 K02591 | *Epsilonproteobacteria* |
| Denitrification | nitric oxide reductase (*norB*) (*norC*) | K02305  K04561 | *Gammaproteobacteria* |
| nitrous oxide reductase (*nos*Z) | K00376 |
| DNRA | nitrite reductase (*nrf*A) | K03385 | *Cytophagia* |
| Anammox | hydroxylamine oxidase | K10535 | *Deltaproteobacteria* |
| Mineralization | glutamate dehydrogenase (*gdh*A) | K00260  K00261  K00262 | *Alphaproteobacteria*  *Gammaproteobacteria* |
| Assimilation | assimilatory nitrate reductase | K00360 | *Alphaproteobacteria* |
| glutamine synthetase (*gln*A) (*glt*B) (*glt*S) | K01915  K00265  K00284 | *Gammaproteobacteria*  *Alphaproteobacteria*  *Betaproteobacteria* |