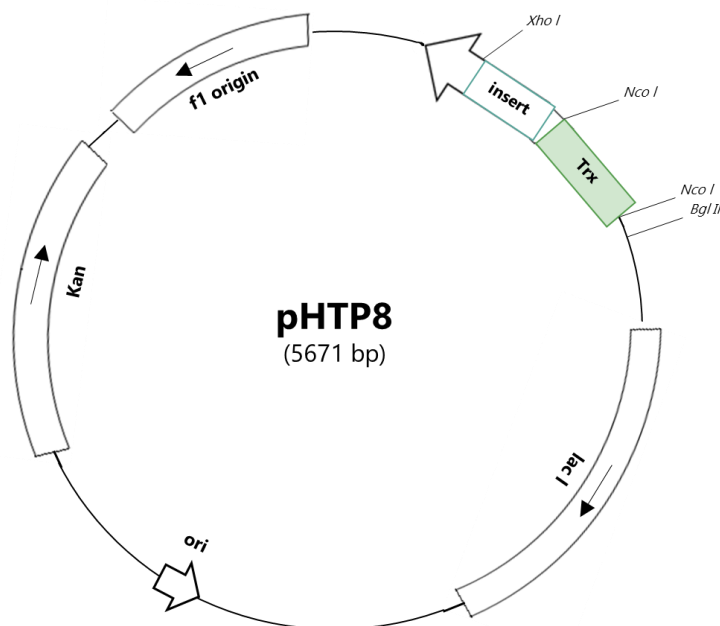


pHTP8 Vector

pHTP8 was designed for the cloning and expression of high-levels of recombinant proteins in *Escherichia coli*. Recombinant proteins are expressed in fusion with the thioredoxin (Trx) protein, which is commonly used to promote solubility and folding of its fusion partners. This vector, included in the portfolio of NZYtech pHTP expression vectors, is part of the NZYEasy Cloning & Expression System. pHTP8 contains two poly-histidine (6xHis) sequences (N- and C-terminal) which allow subsequent recombinant protein purification by immobilized metal ion affinity chromatography (IMAC).

1. Vector Map



pHTP8 Cloning/Expression Region

| Nco I | Trx | Nco I | His-Tag |
|---------------------------------------|---|-----------------------------|-------------------------------------|
| CCATGGG | TAGCGATAAAATTATTCACCTGACT.330bp.CTCGACGCTAACCTGGCCGGTTCTG | CCATGGG | GCAGCAGCCATCATCATCATCATCACAGCAGCGGC |
| MetGlySerAspLysIleIleHisLeuThr.110aa. | LeuAspAlaAsnLeuAlaGlySerAlaMetGlySerSer | HisHisHisHisHisHisSerSerGly | |
| CCTCAGCAAGGGCTGAGG / | CCTCAGCTTCCGCTGAGGTCCGTCGACAAGCTTGC | CGCCGCACTCGAGCACCA | CCACCACCACCACCTGAGATCCGGCTGCT |
| ProGlnGlnGlyLeuArg / | ProGlnLeuProLeuArgSerValAspLysLeuAlaAlaLeuGlu | HisHisHisHisHisHis* | |


⌘ Represents the site where the gene will be inserted.

Note: For correct expression, inserted gene needs to be in frame with pHTP8 5' gene sequence. Inserts correctly cloned into pHTP8 will maintain reading frames starting on the ATG codon.

2. Vector Sequence (5671 bp)

[illegible]

pHTP8 sequence landmarks:

- **T7 promoter:** in gray
- **First ATG (methionine):** in yellow
- **Thioredoxin (Trx) gene:** in green
- **His-Tag coding sequences:** in purple
- **Cloning region:** 
- **T7 terminator:** in dark gray
- **Sequencing primers** (T7 universal and T7 terminator): underlined
- **BglII, NcoI & XhoI recognition sites:** in bold

Sequence added to the final recombinant protein (14.52 KDa):

MGSDKIIHLTDDSFDTDLVKADGAILVDFWAEWCGPCKMIAPILDEIADEYQGKLTVAKLNIDQNPGTAPKYGIRGIPTLLLFKNGEVAATKVGALSKGQLKE
FLDANLAGSAMGSAMGSSHHHHHHSSGPQOGLR