The MBP has been engineered for cytoplasmic expression. MBP fusions made with this vector are expressed by the vector for optional addition to the target protein.

MBP fusions made with this vector are expressed cytoplasmically. The MBP has been engineered for tighter binding to amylose resin.

**pMAL-c5X-His Vector**

**Source:** NEB 10-beta Competent E. coli (pMAL-c5X-His)

Supplied in: 10 mM Tris-HCl, 1 mM EDTA, (pH 7.5).

A gene or open reading frame is inserted into a restriction site of the vector polylinker, in the same translational reading frame as the malE gene (encoding maltose-binding protein). The fusion protein thus produced can be purified by amylase affinity chromatography. The sequence coding for the four amino acids Ile-Glu-Gly-Arg is present just upstream of the XmnI site. This allows the protein of interest to be cleaved from maltose-binding protein with the specific protease Factor Xa. Fragments inserted in the XmnI site (cleaves GAAG↓ATTTC) will produce a fusion protein that, after Factor Xa cleavage, contains no vector-derived residues on the protein of interest.

The sequences of the pMAL vectors, as well as other pMAL information are available at www.neb.com or by e-mail from info@neb.com.

**Usage Notes:** NEB 10-beta Competent E. coli (High Efficiency) (NEB #C3019) is recommended for propagation and subcloning. NEB Express Competent E. coli (High Efficiency) (NEB #C2523) or NiCo21(DE3) Competent E. coli (NEB #C2529) are recommended for expression using this vector.

**References:**

Companion Products Sold Separately:
NEB Express Competent *E. coli* (High Efficiency)
#C2523H 20 x 0.05 ml
#C2523I 6 x 0.2 ml

NiCo21(DE3) Competent *E. coli*
#C2529H 20 x 0.05 ml

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