

HAT™ Protein Expression and Purification System

Catalog No.

631205

Amount

Each

Lot Number

Specified on product label.

Description

This is a complete system for bacterial expression and IMAC purification of proteins. The system is based on the pHAT Vectors which contain a novel histidine affinity tag (HAT) that allows one-step purification of tagged proteins from crude cell lysates. The HAT sequence in these vectors is followed by an enterokinase (EK) cleavage site and an MCS. The HAT sequence and EK site are in frame with the *lacZ* initiation codon. The vector construct is provided in all three reading frames.

Package Contents

Box 1

- 5 µg pHAT10 Vector (0.5 µg/µl)
- 5 µg pHAT11 Vector (0.5 µg/µl)
- 5 µg pHAT12 Vector (0.5 µg/µl)
- 2 µg pHAT-DHFR Control Vector (0.5 µg/µl)

Box 2

- 10 ml TALON® Resin
- 70 ml Buffer A
- 10 ml Buffer B
- 10 ml Buffer C
- 40.1 g Guanidine HCl
- 10 disposable plastic columns

Storage Conditions

- Store vectors at -20°C.
- Store buffers and TALON resin at 4°C.
- Store columns at room temperature.

Shelf Life

- 1 year from date of receipt under proper storage conditions.

Shipping Conditions

- Box 1: Dry ice (-70°C)
- Box 2: Blue ice (4°C)

Takara Bio USA, Inc.

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Product Documents

Documents for our products are available for download at takarabio.com/manuals

The following documents apply to this product:

- HAT Protein Expression and Purification System User Manual
- pHAT 10/11/12 Vector Information Packet

Quality Control Data

1. Plasmid identity and purity:

The identity of each plasmid was verified by electrophoresis on an agarose/EtBr gel after digestion with the indicated enzymes as well as by sequencing the MCS region containing the reading frame shift (for pHAT10, pHAT11, and pHAT12). The purity of each plasmid was checked by determining the A_{260}/A_{280} ratio.

Vector	Enzyme	Fragment Size (kb)
pHAT10/11/12	BamHI	2.8
pHAT-DHFR	EcoRI	3.3
	ApaLI	1.6, 1.2, 0.5

2. Metal loading analysis:

Each lot of TALON Resin is guaranteed to have a minimum Co^{2+} loading of 12 $\mu\text{mol}/\text{ml}$ of bed volume.

3. Test of kit functionality:

HAT-DHFR was expressed in *E. coli* from the pHAT-DHFR Control Vector and purified using the protocol. Eluant samples were analyzed on a 12% SDS-PAGE gel stained with Coomassie blue. The purified HAT-DHFR protein appeared as a single, distinct band, at the expected molecular weight and with the expected intensity.

It is certified that this product meets the above specifications, as reviewed and approved by the Quality Department.

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NOTICE TO PURCHASER:

Our products are to be used for **Research Use Only**. They may not be used for any other purpose, including, but not limited to, use in humans, therapeutic or diagnostic use, or commercial use of any kind. Our products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products or to provide a service to third parties without our prior written approval.

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9/20/2019