ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Anti-E. Coli host cell proteins (HCPs) Antibodies

Cat # ECO12-A Rabbit+Chicken Anti-E. coli HCPs IgGs, Aff. pure **SIZE**: 100 ul

A large number of genes have been cloned and expressed in various host cells (E. coli, yeast, baculovirus, NSO, Sp2/0, HEK, CHO cells). The translated recombinant proteins may remain within the cell, requiring host cell disruption for release, and/or may be secreted into the culture medium. The target recombinant proteins would then be purified from unwanted host cell protein (HCP), often with the aid of a tag (e.g., His, GST, MBP). While traces of HCP (which are often present in the purified material) may not represent a major problem for recombinants that are used for in vitro or research use applications, an increasing number of recombinant proteins are developed for therapeutic purposes (Insulin, Erythropoietin, GM-CSF or humanized antibodies such Rituximab & Xolair), where the presence of HCP is potentially toxic or allergic, may create other health hazards, or otherwise affect the efficacy of the drug. In these cases, detecting residual HCP and establishing minimum acceptable levels is required. Of two typical and powerful methods used for HCP characterization, Western Blot can reveal the number, size and relative concentrations of HCPs, while ELISA can provide ultra-sensitive detection and quantification using an easy, rapid assay that accommodates large numbers of samples and replicates.

During the production of recombinant proteins, host cells die and decompose; thus, regardless of whether the recombinant product is obtained from extracellular medium or after disrupting the host cell, the entire repertoire of host cell proteins present as potential contaminants in downstream purification and processing of the recombinant protein product. The ADI E. coli HCP ELISA relies on polyclonal antibodies from multiple hosts (rabbit, chicken) immunized with lysates of 6 E. coli strains commonly used in recombinant technology -- antibodies with Western Blot-demonstrated multivalent specificities for the wide range of E. coli HCPs. The E. coli HCP ELISA, then, provides a broad-range, sensitive tool to conveniently and efficiently screen for the several potential contaminants that may accompany the recombinant protein during processing.

We have made antibodies to several common strains of E. coli (TOP 10F, HB101, JM109, BL21, DH5 alpha and K12) and rabbits, chickens, and goats to get the maximum coverage of antibody reactivity.

Source of Antigen and Antibodies

Antigen	TOP 10F, HB101, JM109, BL21, DH5 alpha and K12 total protein extracts
Ab Host/type	A mixture of Rabbit and Chicken, Polyclonal affinity purified Ig's (#ECO12-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP #60320, goat anti-chicken IgG-HRP
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ul solution lyophilized powder

Supplied in **Buffer**: PBS+0.1% BSA

Reconstitute powder in PBS in 100 ul

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder

Recommended Usage

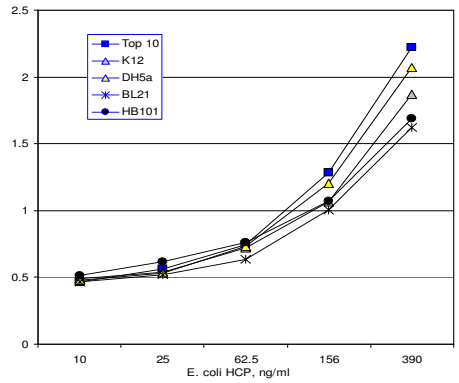
Western Blotting (1:500-1:1-5.000 for affinity pure IgG).
ELISA (1:5,000-25,000)

Histochemistry & Immunofluorescence: not tested.

Specificity & Cross-reactivity

Anti-E. coli antibodies have been shown to detect E. coli proteins from 6 different strains with more or less equal sensitivity. It is possible that the antibodies may detect a specific E. coli contaminants better in a given cell type. The antibodies are a mixture of two hosts (rabbit and Chicken) so a mixture of anti-rabbit and anti-chicken IgG-HRP (or other conjugates) must be used to detect the primary antibodies.

Detection of E. Coli HCPs by ELISA in 5 different E. coli strains with similar sensitivity.



*This product is for In vitro research use only.

Related material available from ADI

#EC11-G E. Coli Proteins-Agarose affinity gel for removing E. coli antibodies
#EC12-AS Rabbit Anti-E. Coli Proteins IgG-Agarose affinity gel for removing E. coli proteins
#ECO11-A Goat Anti-E-coli IgG, aff pure
#800-130-ECP E Coli proteins (5 strains) host cell proteins (HCPs) ELISA kit, 96 tests
#500-100-ECP Mouse Anti-E. coli proteins Ig's ELISA Kit
#500-120-ECP Rabbit Anti-E. coli proteins Ig's ELISA Kit

ECO12-A 110314A

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