

E.coli | 360-HCP ELISA

The *E.coli*|360-HCP ELISA is designed to cover a broader spectrum of *E.coli* host cell proteins (HCPs) than traditional generic HCP assays. While traditional assays are based on one set of antibodies that must work for all processes the enhanced generic 360-HCP ELISA provides four kit types, each using a different antigen preparation so you can try several antibodies to find the one that works best for your samples.

Enhanced Generic 360-HCP ELISA for *E.coli* cell lines

E.coli|360-HCP ELISA is based on W3110 and BL21 (DE3) cell lines which were fermented in different culture media and conditions resulting in several antigen preparations with distinct HCP patterns. By immunizing goats with these antigens, BioGenes has developed a panel of four different HCP ELISAs (type A to D) that together build up the enhanced generic *E.coli*|360-HCP ELISA.

E.coli|360-HCP ELISA consists of four kit types, based on different *E.coli* sub cell lines and culture media:

- | | |
|--------------------|--------------------|
| → Mineral Medium | → LB Medium |
| Type A: BL21 (DE3) | Type C: W3110 |
| Type B: W3110 | Type D: BL21 (DE3) |

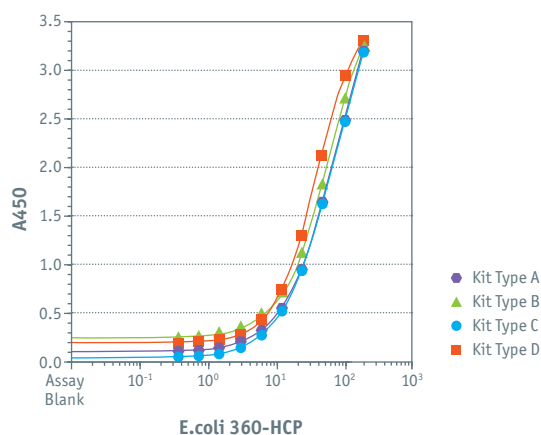
→ Order your *E.coli*|360-HCP ELISA kit today



Sensitivity of the four *E.coli*|360-HCP kits

- LOD between 0.2–0.5 ng/mL
- LOQ between 0.6–1.6 ng/mL
- Working range between 2–100 ng/mL

Figure 1: Standard curves for all four ELISA kit types were obtained by non-linear regression of measured OD values (A450) for different *E.coli* HCP standard concentrations.





Specificity of the E.coli|360-HCP ELISA

The E.coli|360-HCP ELISA kits (A to D) have a high specificity for the corresponding E.coli HCP antigen. The specificity was determined by a 2D DIGE Western Blot with Cy5-labeled E.coli|360-HCP standard and the corresponding Cy3-labeled anti-HCP antibodies and is shown as coverage in percent (table 1).

E.coli 360-HCP Antibodies	Coverage
Type A	95,1%
Type B	81,1%
Type C	92,0%
Type D	91,8%

Table 1: Evaluation of HCP coverage of E.coli|360-HCP.

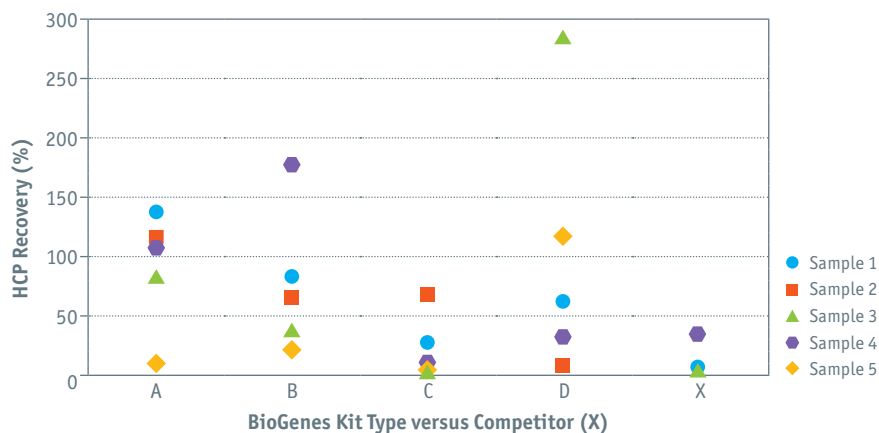


Figure 2: Comparison of selected mock E.coli HCP samples. For each sample the protein amount was determined by Bradford first. Additionally, each sample was analysed using five different E.coli HCP assays: the four enhanced BioGenes generic E.coli HCP assay types A to D and a commonly used, commercially available, generic E.coli HCP assay. The protein recovery was calculated in percentage of the Bradford value determined for the sample.

Superior HCP Recovery with E.coli|360-HCP ELISA

The recovery for each sample depends strongly on the assay used (figure 2). In case of sample 1, a recovery of 80% was estimated using kit type B. For samples 2 and 3 the best recovery was determined using kit type A. For sample 5, a sufficient recovery was only determined using kit type D, recovery rates determined with the other three kit types were below 30%. The competitor kit shows recoveries below 30% for all samples. Recoveries higher than 100% are based on overestimation.

How it Works

For BL21 (DE3) cell line based samples we recommend kit type A or D. Accordingly, for W3110 based samples we recommend kit type B or C (table 1). In all other cases we recommend to first use the Starter Set to fast and easily choose the most appropriate kit type. Alternatively, BioGenes offers a Performance Study and identifies the optimal ELISA kit type as a service.

→ [Order your E.coli|360-HCP ELISA kit today](#)