

## B13 recombinant protein

Recombinant antigen B13 for Trypanosoma cruzi

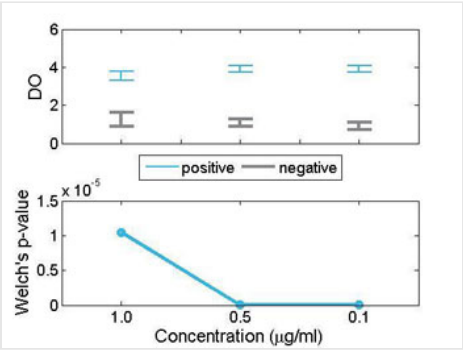
|                              |                        |                              |
|------------------------------|------------------------|------------------------------|
| CATALOG #<br><b>AAA72861</b> | HOST<br><b>E Coli.</b> | APPLICATIONS<br><b>ELISA</b> |
|------------------------------|------------------------|------------------------------|

### PRODUCT SYNONYMS

B13; Recombinant antigen B13 for Trypanosoma cruzi; B13 surface promastigote protein; B13 recombinant protein

### PRODUCT SPECIFICATIONS

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                                    | E Coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Specificity                                             | The protein is immunoreactive against seropositive individuals to Chagas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Purity/Purification                                     | >98% in a SDS-PAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Form/Format                                             | Dry powder (stabilized with 5% trehalose).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Applicable Applications for B13 recombinant protein     | ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Recombinant Antigen                                     | Trypanosoma cruzi antigen B13 (Umezawa et al., 2003).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Note                                                    | Absence of precipitation after a freezing and thawing cycle is okay.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Total Quantity per Aliquot                              | 0.1 mg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Observations                                            | In some cases, purified proteins run at a molecular weight which is slightly different to the theoretically calculated molecular weight maybe due to the his-tag presence or sequences of hydrophobic residues, which can produce a delay in SDS-PAGE. Proteins should be maintained frozen at high concentration. The dilution to be performed for carrying out an ELISA assays, should be freshly-made with a small quantity of protein. In order to defrost the protein, maintain the aliquot at 25°C without shaking to avoid aggregation. Prior making test dilutions and after defrosting the protein, is recommended to remove possible protein aggregates by centrifuging the stock solution, avoiding alterations in the immobilization of the biomolecule to the solid surface. |
| Reconstitution                                          | With approximately 0.093 ml of sterile double-distilled water, a final concentration of approximately 1.07 mg/ml will be obtained. The solubilization of the cake should be developed for 15 minutes to allow a homogenous protein solution, considering that part of the cake can be on the glass-walls of the container. Upon reconstitution, leave the solution at least 15 minutes homogenizing with a mild agitation at 4°C. Avoid vigorous shaking that can cause foaming and protein denaturation. With this reconstitution, the protein will be maintained at pH 8. It is recommended that the users carry out their absorbance determinations to avoid concentration variabilities due to the equipment used, mainly in reproducibility analysis.                                |
| Protein Concentration Determined Spectrophotometrically | $DO_{280} = 0.33$<br>$A_{0.1\%} (=1g/l) = 0.31$<br>Concentration*: 1.07 mg/ml<br><br>The measurement of the protein concentration has been performed with the theoretical extinction coefficient of the recombinant protein obtained from Gill and von Hippel, 1989. It is recommended that the users carry out their absorbance determinations to avoid equipment variabilities regarding final concentration, mainly in reproducibility analysis.                                                                                                                                                                                                                                                                                                                                       |
| Preparation and Storage                                 | Upon arrival, it should be stored at 4°C to -20°C. Aliquot after reconstitution in order to avoid repeated freezing and thawing cycles and store at -20°C to -80°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

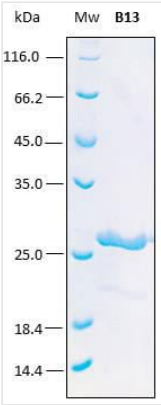


Standard Curve (Sample)

The titer has been suggested in reference to an "in-house" ELISA kit performed over the first lot obtained. ELISA assays were performed with a serum sample panel of 25 positive-specimen sera and 5 negative specimen sera, validated by chemiluminescence (Architect, Abbot) and obtained from the Andalusian Public health System Biobank. Each end user should carry out his own titration for his particular application. In this plot, the optical density at 450/620 nm for positive (blue) and negative (gray) IgG sera for Chagas disease are compared for each concentration of the recombinant antigen. An appropriate statistical test of significance for the comparison of means between both groups, the Welch's test, is employed. Eligible concentrations for the use of the antigen should present statistically significant differences between positive and negative sera. This happens when the intervals at the top do not overlap and, equivalently, when the p-value at the bottom is below 0.05. In the present figure, all p-values are below 0.05 and thus the intervals do not overlap. Therefore, any of the showed concentrations can be used to distinguish between positive and negative sera.

| COMPONENTS     | COMPOSITION                                                                                      |
|----------------|--------------------------------------------------------------------------------------------------|
| his-B13        | recombinant antigen with a his-tag in its N-terminus                                             |
| Storage buffer | 20 mM phosphate buffer pH 8, 0.15 M NaCl, 5 mM EDTA and 0.1% polyoxyethylene (10) tridecyl ether |

Application Data  
Batch Composition



SDS-PAGE

SDS-PAGE analysis (15%) of 3 µl of recombinant B13. Purity is > 98% as determined by gel electrophoresis. Bands which slightly appear at approx. 20 and 16 kDa correspond to this same protein as it is showed in a western blot performed with a his-tag monoclonal antibody

ADDITIONAL INFORMATION

|                                                         |                                                                                                                                                                                                              |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for B13 recombinant protein | The T. cruzi antigen B13 has been prepared as a recombinant antigen fused to a his-tag in its N-terminal. It corresponds to the truncated T. cruzi surface antigen 2 (CA-2). Also known as Ag2, PEP2, TcR34. |
| Product Categories/Family for B13 recombinant protein   | PARASITES                                                                                                                                                                                                    |

NCBI AND UNIPROT INFORMATION

|                  |                                                                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Molecular Weight | Determined by SDS-PAGE, the protein band is between molecular markers of 35,000 - 25,000 Da, while relative molecular mass calculated from amino acid sequence is 22.532,8 Da. |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/b13-recombinant-protein-e-coli-elisa/72861>