ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

GST Protein-Agarose (Aff matrix)

Cat. GST15R-AS GST protein-Agarose **SIZE**: 0.50 ml
FORM: Soln Lyophilized

Expression of genes in E. coli or yeast or baculovirus offers a convenient system to produce large amounts of recombinant proteins that may otherwise be difficult to isolate from natural cells and tissues. Very often antibodies to these newly identified proteins are not available to study its biochemical properties, monitor protein expression, and purification. In order to circumvent this problem, short pieces of well-defined peptides (Poly-His, Flag-epitope or c-myc epitope or HA-tag) or small proteins (bacterial GST, MBP, Thioredoxin, b-Galactosidase, VSV-Glycoprotein etc) are often cloned along with the target gene. Proteins are expressed as fusion proteins. Antibodies to these fusion-tags are already available to monitor fusion protein expression and purification. Therefore, fusion-tags serve as universal tags much like secondary antibodies. Many tags have their own characteristics. Poly-His-fusion proteins (6 x His) can bind to Nickel-Sepharose or Nickel-HRP. GST-fusion proteins can bind to glutathione-Sepharose. Therefore, a high degree of purification of fusion protein can be achieved in just one affinity purification step. Purity of fusion proteins can be followed by Tag-antibodies. Very often, fusion proteins are directly injected into animals to generate antibodies. Some fusion tags can be removed later by treatment with enzymes to generate tag-free recombinant proteins.

Source of Antigen and Antibodies

Bacterial GST (*Schistosoma japonicum*, ~27 kda) was expressed in E. coli and purified (>97%). Purified GST was coupled to agarose at ~5 mg/ml of beads (**Cat # GST15R-AS**). The affinity matrix is supplied in PBS pH 7.4 containing 0.05% azide. The column has a binding capacity of approx. 2-5 mg anti-GST per ml of beads.

Store at 4oC. DO NOT FREEZE.

GST protein concentration must be optimized for each application under defined experimental conditions.

Suggested uses

Many recombinant proteins are expressed and purified as GST-fusion protein and then injected into animals to raise antibodies. Antibodies are produced against the GST protein and the fusion protein. Anti-GST antibodies may interfere with some analyses. The GST-agarose column (Cat # GST15R-AS) can be used to remove the anti-GST antibodies.

We recommend processing approx. 1 ml antiserum per 0.25 ml of the beads or it can be scaled up accordingly. Load antiserum diluted 1:5 in PBS to adsorb anti-GST at room temp. Collect unbound fraction containing GST-depleted antiserum. It may be necessary to repeat this adsorption if the sample contain high concentrations of ant-GST.

The column can be regenerated by passing 3 mls of 0.1M Glycine buffer, pH 2.5, and then immediately washing with PBS pH 7.4 with 10-20 volumes. Store column in PBS containing 0.05% azide at 4oC. DO NOT FREEZE the beads at any stage.

This product is for in vitro research use only.

Related material available from ADI

Purified GST, Monoclonal anti-GST, GST Coated ELISA plates; Anti-Goat HRP conjugates'

Western blot Recycling Kit; Strips antibodies in 5-10 min at room temp.

GST15R-AS 71215A

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com