

**Blank-CTA**  
**NON-TARGETED CTA CONTROL MOLECULE**  
*a tool for use as control for peptide-targeted activating agents;  
non-targeted via non-specific peptide conjugated to Cholera Toxin A*

**Catalog Number:** IT-61  
**Quantity:** 25 micrograms, 100 micrograms, 250 micrograms  
**Format:** PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), no preservative. Sterile-filtered.

**Background:**

Controls are a vital part of the scientific procedure; without them it is difficult to isolate the specific effects from the non-specific or artifactual. This control molecule is the same molecular weight, consists of similar, comparable materials and is synthesized with the same protocols as the targeted CTA conjugate. The difference is the cell-specific targeting agents are replaced with "blanks," antibodies or peptides that have no specificity, and no ability to target cells. In short, they are the perfect control molecules for behavioral experiments with Advanced Targeting Systems' targeted CTA conjugates.

Blank-CTA is the perfect control for use with peptide CTA conjugates. The sequence of the non-targeted peptide of this molecule is an 11-amino acid, randomly mixed version of the sequence of melanocyte-stimulating hormone, with amino acid residues that are typical of peptides that bind to G-protein-coupled receptors. Examination of the peptide sequence using NCBI/BLAST reveals no homologous sequences. In short, Blank-CTA is the perfect control molecule for behavioral experiments with our targeted CTA conjugates.

**Specificity and Preparation:**

This control conjugate (molecular weight 24 kDa) has no known specificity. Blank-CTA is a chemical conjugate between a non-targeted peptide and the catalytic A subunit of cholera toxin.

**Usage and Storage:**

Blank-CTA serves as a control for peptide-targeted CTA conjugates (SP-CTA, Neurotensin-CTA, etc.). **There may be lot-to-lot variation in material; working dilutions must be determined by end user. If this is a new lot, you must assess the proper working dilution before beginning a full experimental protocol.** Gently spin down material before use; 5-10 seconds in a microfuge should be adequate. Store the material in undiluted aliquots at  $-20^{\circ}\text{C}$  for 1-2 months. For longer term storage store the material at  $-80^{\circ}\text{C}$ . Material should be aliquoted to a convenient volume and quantity to avoid repeated freezing and thawing that can damage the protein content. Thawing should be done at room temperature or on ice. The thawed solution should remain on ice until use.

This material is an extremely potent cytotoxin. Handling should be done by experienced personnel. Gloves and safety glasses are required when handling this product. Care in disposal is mandatory; autoclaving or exposure to 0.2 M sodium hydroxide will inactivate the material. All labware that comes into contact with this material should be likewise treated.

**To view protocol(s) for this and other products please visit: [www.ATSBio.com/support/protocols](http://www.ATSBio.com/support/protocols)**