1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( C_{310}H_{481}N_{87}O_{100}S_{8} \)
Batch Molecular Weight: 7283.19
Physical Appearance: White lyophilised solid
Net Peptide Content: 90%
Counter Ion: TFA
Solubility: Soluble to 1 mg/ml in water
Storage: Store at -20°C
Peptide Sequence:

\[
\text{Leu-Thr-Cys-Val-Thr-Ser-Lys-Ser-Ile-Phe-}
\text{Gly-Ile-Thr-Thr-Glu-Asp-Cys-Pro-Asp-Gly-}
\text{Gln-Asn-Leu-Cys-Phe-Lys-Arg-Arg-His-Tyr-}
\text{Val-Val-Pro-Lys-Ile-Tyr-Asp-Ser-Thr-Arg-}
\text{Gly-Cys-Ala-Ala-Thr-Cys-Pro-Ile-Pro-Glu-}
\text{Asn-Tyr-Asp-Ser-Ile-His-Cys-Cys-Lys-Thr-}
\text{Asp-Lys-Cys-Asn-Glu}
\]

2. ANALYTICAL DATA

HPLC: Shows 98.3% purity
Product Name: AdTx1  
Catalog No.: 5940  
Batch No.: 2

**Description:**
Selective, high affinity, non-competitive $\alpha_{1A}$ adrenoceptor antagonist ($K_i = 0.35$ nM). Exhibits no significant activity against a range of other GPCRs, including $\alpha_2$, $\beta_1$, and $\beta_2$ adrenoceptors. Antagonizes effects of phenylephrine (Cat. No. 2838) on isolated rabbit prostate muscle in vitro and on intra-urethral pressure in rats.

**Physical and Chemical Properties:**
Batch Molecular Formula: $C_{310}H_{461}N_{97}O_{106}S_8$
Batch Molecular Weight: 7283.19
Physical Appearance: White lyophilised solid

**Peptide Sequence:**
Leu-Thr-Cys-Val-Thr-Ser-Lys-Ser-Ile-Phe-Gly-Ile-Thr-Thr-Glu-Asp-Cys-Pro-Asp-Gly-
Gln-Asn-Leu-Cys-Phe-Lys-Arg-Arg-His-Tyr-
Val-Val-Pro-Lys-Ile-Tyr-Asp-Ser-Thr-Arg-
Gly-Cys-Ala-Ala-Thr-Cys-Pro-Ile-Pro-Glu-
Asn-Tyr-Asp-Ser-Ile-His-Cys-Cys-Lys-Thr-
Asp-Lys-Cys-Asn-Glu

**Storage:** Store at -20°C

**Solubility & Usage Info:**
Soluble to 1 mg/ml in water
This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Net Peptide Content:** 90% (Remaining weight made up of counterions and residual water).

**Counter Ion:** TFA

**Stability and Solubility Advice:**
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).
Peptides in solution are much less stable than in lyophilized form. This is especially true for peptides whose sequences contain amino acids such as Cys, Met, Trp, Asn, Gin, and N-terminal Glu.
Therefore we recommend storing peptides in solution for as short a time as possible. Avoid repeated freeze thaw cycles by dividing the peptide solution into aliquots and storing the aliquots at -20°C. Any portion of an aliquot unused after thawing should be discarded.
Peptides stored in solution can occasionally be susceptible to bacterial degradation. We recommend using sterile solutions or passing the peptide solution through a 0.2 μm filter to remove potential bacterial contamination whenever possible.

**References:**

Quinton et al (2010) Isolation and pharmacological characterization of AdTx1, a natural peptide displaying specific insurmountable antagonism of the $\alpha_{1A}$-adrenoceptor. Br.J.Pharmacol. 159 316. PMID: 20015090.