

**sC18 - Biotin-labeled**

Trifluoroacetate

Cat. No.	Amount
CPP-P20	0,5 mg

For in vitro use only!**Shipping:** shipped on blue ice**Storage Conditions:** store at -20 °C**Additional Storage Conditions:** protect from light**Shelf Life:** 12 months after date of delivery**Molecular Weight:** 2296 Da confirmed by ESI-MS, peptide provides 9 positive charges in side chains. Up to 9 trifluoroacetate residues may be present resulting in an apparent MW of 3.4 kDa.**Purity:** > 99 % (HPLC)**Form:** powder**Solubility:** water**Description:**

sC18 is a C-terminal fragment (aa 106-121) of the cationic amphipathic peptide CAP18. It facilitates internalization of cargo into living cells with high transduction rates and efficiencies. It shows no cytotoxic effects on a number of cell lines (including HeLa, MCF-7, HEK293, HT-29, FaDu, BJAB) up to a concentration of 100 µM. Addition of a 10 to 20-fold excess of free sC18 increases rate and efficiency of cargo internalization.

Biotin-labeled sC18 can be used for complex formation with Avidin/Streptavidin-containing cargo and subsequent complex internalization.

Sequence:

Biotin-GLRKRLRKFNRNKEK-amide
Biotin - labeled peptide.

Stock solution:

Dissolve 0.5 mg in 1.5 ml sterile and oxygen-free water according to the **general manual**. Use the solution immediately or aliquot and store at -20 °C. Avoid freeze / thaw cycles. 1 µl of stock solution contains 0.32 µg peptide according to 0.1 nmol.

Usage:

Perform calculation, complex formation and cargo transduction according to detailed protocols given in the **general manual**.

Activity:

1 µl of stock solution forms a non-covalent complex with 0.1 µmol avidin or streptavidin containing cargo. Try to avoid formation of large size aggregates: An equimolar ratio of biotin and avidin/streptavidin groups is recommended as starting point. Please keep in mind: Avidin/Streptavidin contain 4 biotin binding sites.

Selected References:

Reissmann (2014) Cell penetration: scope and limitations by the application of cell-penetrating peptides. *J. Pept. Sci.* **20**:760.
 Hoyer *et al.* (2012) Dimerization of a cell-penetrating peptide leads to enhanced cellular uptake and drug delivery. *Beilstein J. Org. Chem.* **8**:1788.
 Richter *et al.* (2012) (18)F-Labeled phosphopeptide-cell-penetrating peptide dimers with enhanced cell uptake properties in human cancer cells. *Nucl. Med. Biol.* **39**:1202.
 Splith *et al.* (2012) Specific targeting of hypoxic tumor tissue with nitroimidazole-peptide conjugates. *ChemMedChem* **7**:57.
 Splith *et al.* (2010) Protease-activatable organometal-Peptide bioconjugates with enhanced cytotoxicity on cancer cells. *Bioconjug. Chem.* **21**:1288.