



JBS-Nucleoducin

Cocktail for transduction of nucleotides into live cells

Cat. No.	Amount
CPP-C02S	75 reactions
CPP-C02L	375 reactions

For *in vitro* use only!

Shipping: shipped on blue ice

Storage Conditions: store at -20 °C

Shelf Life: 12 months

Form: lyophilized powder, contains CF₃COO⁻ (trifluoro acetate) as counter ion

Solubility: soluble in water

Description:

JBS-Nucleoducin is a mixture of different cell penetrating peptides and proteins, optimized for internalization of nucleoside phosphates into living cells. Some components contain a nuclear localization sequence.

Compared to other CPP or lipid transduction reagents the transduction rate and efficiency are strongly enhanced.

The multi-component composition of JBS-Nucleoducin

- facilitates efficient complexation with nucleotide cargos
- is compatible with a large number of cell types and membrane structures
- triggers different transduction mechanisms

JBS-Nucleoducin shows only marginal cytotoxic effects on a number of cell lines (including HeLa, Jurkat, Swiss 3T3, NIH 3T3, NB-4, and COS-7) and can be therefore, widely used for internalization of nucleotides. For cell survival the critical concentration of JBS-Nucleoducin in serum-free transduction medium is in the range of 10 % stock solution (20 µl in 200 µl) at which cell viability and cell membrane integrity are only marginally reduced (approx. 30 %).

Stock solution:

Dissolve the whole content of the vial in sterile and oxygen free water (CPP-C02S in 250 µl; CPP-C02L in 1.25 ml) according to the **general manual**. Use the solution immediately or aliquot and store at -20 °C. Please note that the cocktail has proteolytic activity and may form disulfides and S-oxide (Met) when stored in solution. Please also note that the cocktail may form insoluble disulfides (Cys) and S-oxides (Met) when stored in solution. For elimination of potential precipitated material quick-spin stock solution (5.000 - 10.000 g, 5 min) immediately prior use and transfer supernatant into a fresh tube.

Usage:

Perform calculation, complex formation and cargo transduction according to detailed protocols given in the **general manual**. JBS-Nucleoducin can be used for transduction of larger amounts.

Activity:

4 µl of stock solution is necessary for formation of a non-covalent complex with 1 µg of a nucleoside triphosphate (MW approx. 0.5 kDa carrying 4 negative charges). For different MWs and/or different charges adjust amount of stock solution accordingly.

Selected References:

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