

VIROMER[®] mRNA in vivo HQ

Protocol for local application

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Application: This product facilitates the delivery of messenger RNA (mRNA) through local (im, id, it) injection into laboratory animals. Viromer[®] IN VIVO products are preformulated, lyophilized materials that form a delivery complex upon reconstitution with mRNA. Full product analytics are separately provided in a Certificate of Analysis (CoA).

Prepare mRNA in nuclease-free water at the indicated concentration. Avoid the presence of multivalent ions such as phosphate, citrate or EDTA in the mRNA stock. Use sterile, disposable needles and syringes. Allow all reagents to warm to room temperature.

Content:

container	content	usage	# container
2R glass vial	Lyophilized Viromer	For rehydration with 250µl nuclease-free water having 0.4 mg/ml mRNA	6
Nalgene bottle	20ml Buffer (liquid)	For dilution of Viromer:mRNA complexes (after rehydration)	1

Storage: Store refrigerated at 2 to 8°C. Lyophilized Viromer[®] mRNA in vivo HQ reagents are stable for at least 6 months. It is recommended to close the bag immediately after vial removal. After rehydration, Viromer[®]:mRNA complexes are stable for up to 6h.

Protocol:

1. Provide 250µl of 0.4 mg/ml target mRNA in nuclease-free water.
2. Rehydrate one vial of lyophilized Viromer in vivo HQ reagent with 250µl of diluted mRNA.
3. Pipet up and down carefully and allow complex formation and reconstitution for 5 min.
4. Perform local injections and titrate doses as per table below:

Injection volume	mRNA / injection
10µl	4µg
25µl	10µg
50µl	20µg

Volumes and doses given here represent a single local injection.

5. Expression from mRNAs at local site can begin as early as 2h after injection.
6. If necessary, Viromer:mRNA complexes can be diluted for in-vitro use. Therefore, dilute the complexes from step #3 using the provided Buffer. Usually, a single in vitro dose of e.g. 50ng/96-well is sufficient to gain high expression.