

DATASHEET

FluMaXx VLS

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Oxygen scavenger for single molecule imaging
Cat. #: 5162-01

For Laboratory Use Only.
Not for Use in Diagnostic Processes.

Kit Content

5x 250µl FluMaXx¹ VLS (2x stock, lyophilized)
1x 500µl ADM (ATP/DTT² Mix, 10x stock, lyophilized)
1x 1.5ml Methylcellulose stock solution (0.5% in Milli-Q™ water)

¹ Contains: Glucose oxidase, catalase, imidazole pH 7.4, 10mM KCl, EGTA, MgCl₂, glucose, cryoprotectants (proprietary formula);

² Contains: ATP, DTT;

Product Documentation

FluMaXx VLS is a fluorescence oxygen scavenging system to improve the stability of fluorescent dyes under conditions, where low salt is required. The system was developed for nucleation assays using actin and is thus suitable for assays requiring similar salt conditions. The efficiency of FluMaXx VLS is illustrated by its ability to prevent e.g. filamentous actin from fragmentation, which are extremely prone to photon induced chemical damage.

FluMaXx VLS contains all vital components for high resolution monitoring of assays using, resp. inducing cytoskeletal polymers. This optimized catalase/glucose oxidase enzyme system, protects the natural fluorescence intensity of the dye and thus maximizes the fluorescence intensity. A novel optimization of FluMaXx VLS is based on the stabilization of the catalase enzyme. Catalase normally cannot be frozen in solution without a major loss of activity and furthermore is inactivated by higher concentrations of reducing agents.

Our proprietary formula of the FluMaXx VLS permits refreezing after reconstitution without loss of activity. The buffer contains 5mM DTT, showing a beneficial effect on performance without measurable damage of the enzyme system.

To guarantee the high quality of FluMaXx VLS, all critical components are supplied as a lyophilized powder.

Preparation of FluMaXx VLS

For flow chamber assays

Add 250µl of ultrapure water to the tube containing FluMaXx VLS and mix with 200µl of

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methylcellulose (MC). After addition of the MC-solution to FluMaXx VLS (2x stock), the mixture is vortexed and centrifuged for 1min, 5000rpm.

Add 500µl ultrapure water to the tube with ADM. ADM is always added freshly to the FluMaXx/MC solution, i.e. before mixing with the sample solution to be observed (e.g. 45µl FluMaXx VLS/MC mix + 5µl ADM).

It is recommended to shortly degas FluMaXx VLS before use to remove trapped air from the viscous solution.

As antifading buffer system

Add 450µl of ultrapure water to the tube containing FluMaXx VLS. The ADM is added before use (e.g. 45µl FluMaXx VLS/MC mix + 5µl ADM).

Storage and Stability

Freshly prepared FluMaXx VLS solution should be used within 1 day, since the activity rapidly decreases.

Aliquots may be prepared for storage:

Example

Prepare five aliquots of 90µl each. Use one aliquot immediately and freeze the remaining four aliquots at -20°C! These aliquots can be used within the next 2 weeks.

DO NOT REFREEZE.