pG-20-hH2A.1, lyophilized DNA

Product Information Sheet
# VS-HSV00001

Features
- Ready-to-use vector for expression of EGFP-histone hH2A.1 fusion protein, fused by a 20 amino acid linker
- Applications include modern fluorescence microscopy techniques to determine
  1. localization,
  2. binding,
  3. dynamics, and, when a second color is available,
  4. protein-protein interactions and
  5. protein-protein proximities
- and fluorescence methods like FRET, FRAP, FCS, RICS, FCCS, and F3H.

Description
In eukaryotic cell nuclei, histones pack the DNA into structural units called nucleosomes which aggregate to form chromatin. Histones are grouped in families: histones H2A, H2B, H3, and H4 are the core histones while H1 and H5 are linker histones. Most of these histones stand for a group of variants that adopt similar structural folds and share sequence homology. Histones H1, H3 and H2A have large groups of variants, while histone H4 is its sole representative and has no variants. hH2A.1 is a H2A variant.

Two of each of the four core histones assemble to form one octameric nucleosomal core. 147 base pairs of DNA wrap around this core particle 1.65 times in a left-handed super-helical turn. The linker histone H1 binds the nucleosome at the entry and exit sites of the linker DNA. Histones undergo post-translational modifications that alter their interaction with DNA and nuclear proteins. The H3 and H4 histones have long tails protruding from the nucleosome, which can be covalently modified at several places. The core of the histones H2A, H2B, and H3 can also be modified. Histone modifications act in diverse biological processes such as gene regulation, DNA repair, mitosis, and meiosis.

MoBiTec offers expression vectors coding for human histone proteins (and their mutants) in fusion with EGFP. Most of the fusion proteins can be expressed either with an N- or a C-terminal EGFP-tag.
**Vector Map**

pG-20-hH2A.1

6131 bps

**Order Information, Shipping and Storage**

<table>
<thead>
<tr>
<th>Order#</th>
<th>Product</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>VS-HSV00001</td>
<td>pG-20-hH2A.1</td>
<td>15 µg</td>
</tr>
</tbody>
</table>

shipped at room temperature (RT); store at 4 °C.
Once the DNA has been dissolved in sterile water or buffer we recommend storage at -20 °C

**Contact and Support**

MoBiTec GmbH ● Lotzestrasse 22a ● D-37083 Goettingen ● Germany

Customer Service – General inquiries & orders
phone: +49 (0)551 707 22 0
fax: +49 (0)551 707 22 22
e-mail: order@mobitec.com

Technical Service – Product information
phone: +49 (0)551 707 22 70
fax: +49 (0)551 707 22 77
e-mail: info@mobitec.com

MoBiTec in your area: Find your local distributor at www.mobitec.com