PRODUCT INFORMATION

MLL1/WAR Complex (human recombinant)
Item No. 10756

Overview and Properties

Synonyms: Mixed-Lineage Leukemia-1, MLL Core Complex
Source: Recombinant proteins expressed in E. coli. MLL1 (Item No. 10658), WDR5 (Item No. 10944), Ash2L (Item No. 10946), and RbBP5 (Item No. 10947) are expressed with N-terminal His-SUMOpro affinity tags. The his-SUMO affinity tags were removed using Recombinant SUMO Protease 1 (Ulp1). SUMOpro affinity tags were used under non-exclusive license from LifeSensors, Inc. www.lifesensors.com.

Batch specific information can be found on the Certificate of Analysis or by contacting Technical Support

Molecular Weight: ~180 kDa
Storage: -80°C (as supplied)
Stability: As supplied, 6 months from the QC date provided on the Certificate of Analysis, when stored properly
Purity: batch specific (≥90% estimated by SDS-PAGE)
Supplied in: batch specific
Protein Concentration: batch specific mg/ml
Activity: batch specific U/ml; Activity is determined qualitatively by the modification of core histones (Item No. # 11010) detected by autoradiography after treatment with [3H]-SAM and MLL1/WAR complex.
Specific Activity: batch specific U/mg

Image(s)

Autoradiograph of Core Histone (Cayman Item No. 11010) separated on SDS-PAGE following reaction with [3H]-SAM and the MLL1/WAR complex.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Name</th>
<th>M.W. (kDa)</th>
<th>mg/ml</th>
<th>Volume</th>
<th>100 µg size</th>
<th>250 µg size</th>
<th>500 µg size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10658</td>
<td>MLL1</td>
<td>24.1</td>
<td>lot specific</td>
<td>lot specific</td>
<td>14 µg</td>
<td>34 µg</td>
<td>68 µg</td>
</tr>
<tr>
<td>10944</td>
<td>WDR5</td>
<td>34.4</td>
<td>lot specific</td>
<td>lot specific</td>
<td>19 µg</td>
<td>49 µg</td>
<td>97 µg</td>
</tr>
<tr>
<td>10946</td>
<td>Ash2L</td>
<td>60.1</td>
<td>lot specific</td>
<td>lot specific</td>
<td>34 µg</td>
<td>85 µg</td>
<td>170 µg</td>
</tr>
<tr>
<td>10947</td>
<td>RbBP5</td>
<td>59.1</td>
<td>lot specific</td>
<td>lot specific</td>
<td>33 µg</td>
<td>83 µg</td>
<td>167 µg</td>
</tr>
</tbody>
</table>

Lane 1: MLL1/WAR complex
(1 µM each of MLL1, Ash2L, RbBP5, WDR5)
Lane 2: MLL1/WAR complex
(3 µM each of MLL1, Ash2L, RbBP5, WDR5)
PRODUCT INFORMATION

Description

The MLL complex methylates histone 3 at lysine 4 (H3K4) to upregulate transcription. MLL1 is the catalytic subunit which exhibits a low basal methyltransferase activity. Addition of WDR5, Ash2L, and RbBP5 (WAR) enhances Histone H3K4 methylation 300-fold; an additional 2-fold activation has been reported for the addition of DPY-30 (Item No. 11178 and Item No. 10945). The MLL core complex colocalizes with RNA Polymerase II on chromosomes and is involved in the transition of paused Pol II to actively-transcribing Pol II. Misregulation of MLL1 by fusion of its non-catalytic N-terminus to any of >50 other proteins leads to leukemia, possibly due to release of paused Pol II at developmentally important sites such as the Hox family of genes. Wild-type MLL1 is targeted to Hox genes through interactions with menin, and is thus important for proper development.

The Cayman MLL1/WAR complex is supplied as four tubes. Combining the four tubes will result in an equimolar ratio of MLL1, WDR5, Ash2L, and RbBP5.

References