FLUOR DE LYS® HDAC8 fluorometric drug discovery kit

A FLUOR DE LYS® fluorescent assay system. The HDAC8 Fluorescent Activity Assay/Drug Discovery Kit is a complete assay system designed to measure the lysyl deacetylase activity of the recombinant human HDAC8 included in the kit. The kit is ideal for chemical library screening for candidate inhibitors or activators or kinetic assay of the enzyme under varying conditions. The FLUOR DE LYS® HDAC8 assay is based on the FLUOR DE LYS® Substrate and FLUOR DE LYS® Developer combination. The assay procedure has two steps. First, the FLUOR DE LYS® Substrate, which comprises an acetylated lysine side chain, is incubated with HDAC6. Deacetylation of the substrate sensitizes the substrate so that, in the second step, treatment with the FLUOR DE LYS® Developer produces a fluorophore.

Although early studies suggested that HDAC8 (histone deacetylase 8) localized to the nucleus and was ubiquitously expressed, subsequent work indicates that in normal tissue it is primarily cytosolic and expressed in smooth muscle cells. However, like other class I HDACs, HDAC8 exhibits trichostatin A-inhibitable histone deacetylase activity and can mediate transcription repression. A crystal structure has been obtained for HDAC8 complexed with another, more potent inhibitor in the trichostatin class (hydroxamic acids). HDAC8 localizes to stress-fibers, along with smooth muscle a-actin and its expression appears to be essential for smooth muscle contractility. This affinity for cytoskeletal proteins may underlie HDAC8's binding to the core binding factor β/smooth muscle myosin heavy chain fusion protein (CBFβ/SMMHC), which is created by the inversion(16) chromosomal translocation (inv(16)). CBFβ/SMMHC can associate with the mSin3A corepressor and may thereby act as a dominant repressor of genes regulated by CBFβ-AML1. Repression of these genes, which in the case of inv(16) would appear to be mediated by HDAC8 activity, is implicated in the genesis of acute myeloid leukemia (AML). siRNA-knockdown of HDAC8 expression has been shown to inhibit the growth of several human tumor cell lines, suggesting that HDAC8 activity may be significant in the pathogenesis of solid as well as hematologic tumors.

Citations: 15

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- Useful for inhibitor screening or characterizing enzyme kinetics
- Includes optimal substrate selected from a panel of acetylated sites in p53 and histones
- Supplied with enough recombinant enzyme for 96 assays (1 x 96-well plate)

Ordering Information

Order Online »

BML-AK518-0001	96 wells

Manuals, SDS & CofA

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Handling & Storage

Long Term Storage -80°C

Shipping Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name	Histone deacetylase 8 fluorescent assay kit
Application	Activity assay, Cell-based assays, Fluorescent detection, HTS
Contents	HDAC8 (human) (recombinant) FLUOR DE LYS®-HDAC8 substrate and developer II Assay buffer Trichostatin A (HDAC inhibitor) White and clear 1/2-vol. 96-well plates, detailed instructions
UniProt ID	Q9BY41

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