

## [histone-H3]-lysine-36 demethylase

Cat. No. EXWM-0644

Lot. No. (See product label)

### Introduction

#### Description

Requires iron(II). Of the seven potential methylation sites in histones H3 (K4, K9, K27, K36, K79) and H4 (K20, R3) from HeLa cells, the enzyme is specific for Lys-36. Lysine residues exist in three methylation states (mono-, di- and trimethylated). The enzyme preferentially demethylates the dimethyl form of Lys-36 (K36me<sub>2</sub>), which is its natural substrate, to form the monomethyl and unmethylated forms of Lys-36. It can also demethylate the monomethyl- but not the trimethyl form of Lys-36.

#### Synonyms

JHDM1A; JmjC domain-containing histone demethylase 1A; H3-K36-specific demethylase; histone-lysine (H3-K36) demethylase; histone demethylase; protein-6-N,6-N-dimethyl-L-lysine,2-oxoglutarate:oxygen oxidoreductase

### Product Information

#### Form

Liquid or lyophilized powder

#### EC Number

EC 1.14.11.27

#### Reaction

protein N<sub>6</sub>,N<sub>6</sub>-dimethyl-L-lysine + 2 2-oxoglutarate + 2 O<sub>2</sub> = protein L-lysine + 2 succinate + 2 formaldehyde + 2 CO<sub>2</sub> (overall reaction); (1a) protein N<sub>6</sub>,N<sub>6</sub>-dimethyl-L-lysine + 2-oxoglutarate + O<sub>2</sub> = protein N<sub>6</sub>-methyl-L-lysine + succinate + formaldehyde + CO<sub>2</sub>; (1b) protein N<sub>6</sub>-methyl-L-lysine + 2-oxoglutarate + O<sub>2</sub> = protein L-lysine + succinate + formaldehyde + CO<sub>2</sub>

#### Notes

This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

### Storage and Shipping Information

#### Storage

Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.