

PRODUCT INFORMATION



JMJD2D (human, recombinant)

Item No. 10335

Synonyms: JHDM3D, Jumonji Domain Containing 2D, KDM4D, Lysine (K)-Specific Demethylase 4D

Source: Active recombinant human N-terminal His-tagged protein, expressed in *E. coli*

Amino Acids: 1-354 (C-terminal truncation)

Uniprot No.: Q6B0I6

Molecular Weight: 42.7 kDa

Storage: -80°C (as supplied)

Stability: ≥6 months

Purity: *batch specific* (≥75% estimated by SDS-PAGE)

Supplied in: 50 mM HEPES, pH 7.4, with 150 mM sodium chloride and 20% glycerol

Protein Concentration: *batch specific* mg/ml

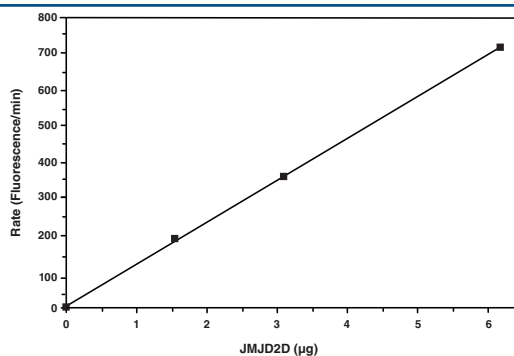
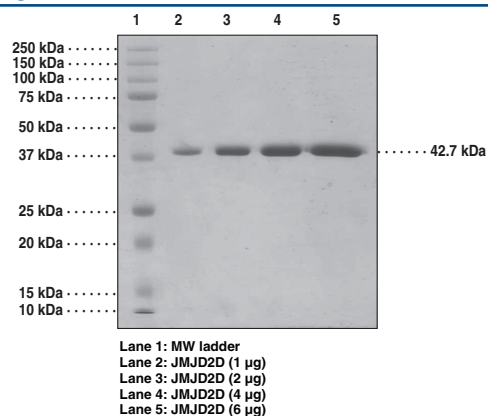
Activity: *batch specific* U/ml

Specific Activity: *batch specific* U/mg

Unit Definition: nmol/min/mg; one unit of activity is defined as the amount of enzyme required to produce 1 nmol of formaldehyde at 37°C in 50 mM HEPES, pH 7.4, containing 0.05% Tween 20, 0.1 mM sodium L-ascorbate, 10 μM ferrous ammonium sulfate, 0.5 mM NAD⁺, and 50 μM disodium oxoglutarate

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Methylation of lysine residues in core histones plays a critical role in regulating gene expression.¹ Jumonji domain containing 2D (JMJD2D) catalyzes the demethylation of di- and tri-methylated forms of histone H3 at lysine residue 9 (me 2/3), leading to transcriptional repression and activation, respectively.² Like other JmjC protein hydroxylase family members, JMJD2D is an α -ketoglutarate-dependent Fe (II) oxygenase.³ Because of their implication in cancer cell growth, jumonji C domain-containing histone demethylase inhibitors may have the capacity to be anticancer agents.¹

References

1. Hamada, S., Kim, T.-D., Suzuki, T., *et al.* Synthesis and activity of N-oxalylglycine and its derivatives as Jumonji C-domain-containing histone lysine demethylase inhibitors. *Bioorg. Med. Chem. Lett.* **19**, 2852-2855 (2009).
2. Kouzarides, T. Chromatin modifications and their function. *Cell* **128**, 693-705 (2007).
3. Couture, J.-F., Collazo, E., Ortiz-Tello, P.A., *et al.* Specificity and mechanism of JMJD2A, a trimethyllysine-specific histone demethylase. *Nat. Struct. Mol. Biol.* **14**(8), 689-695 (2007).

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