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Produktinformation



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Zuschläge

- Mindermengenzuschlag
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PRODUCT INFORMATION



JMJD2D Strep-tagged (human recombinant)

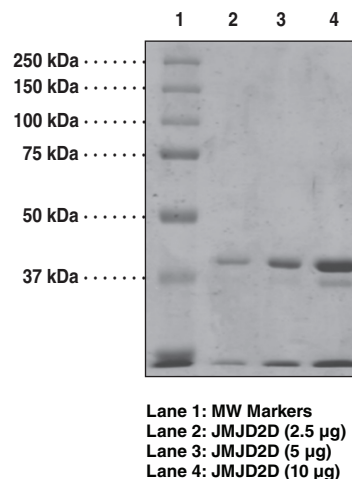
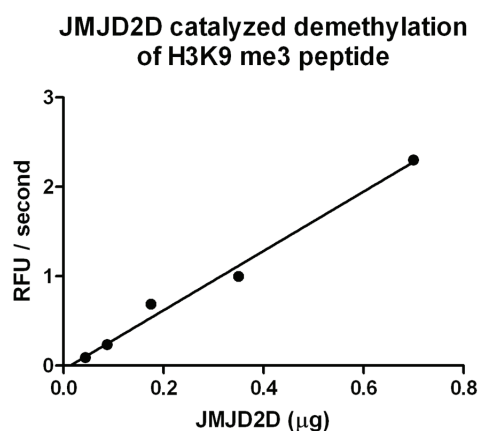
Item No. 11300

Overview and Properties

Synonyms: Jumonji Domain Containing 2D, KDM4D, Lysine-specific Demethylase 4D
Source: Recombinant N-terminal Strep II-tagged protein expressed in *E. coli*
Amino Acids: 4-354
Uniprot No.: Q6B0I6
Molecular Weight: 42.6 kDa
Storage: -80°C (as supplied); avoid freeze/thaw cycles by aliquoting protein.
Stability: ≥6 months
Purity: *batch specific* (≥70% estimated by SDS-PAGE)
Supplied in: *batch specific*
Protein
Concentration: *batch specific* mg/ml
Activity: *batch specific* U/ml
Specific Activity: *batch specific* U/mg
Unit Definition: One unit is defined as the amount of enzyme required to produce 1 nmol of NADH per minute at 37°C in 50 mM HEPES buffer, pH 7.4, containing 50 mM sodium chloride, 1 mM ascorbic acid, 50 μM ferrous ammonium sulfate, 1 mM NAD⁺, 1 mM α-ketoglutarate, 0.1 μM FDH, and 125 μM H3K9me3 peptide.

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.

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PRODUCT INFORMATION



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 Purification of Fe-dependent JmjC family members by IMAC can result in displacement of the catalytic iron and decreased activity, therefore this Strep-tagged protein is purified by affinity chromatography using Strep-Tactin coated resin.⁴ 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(10)**, 2852-2855 (2009).
2. Kouzarides, T. Chromatin modifications and their function. *Cell* **128(4)**, 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).
4. Krishnan, S., Collazo, E., Ortiz-Tello, P.A., *et al.* Purification and assay protocols for obtaining highly active Jumonji C demethylases. *Anal. Biochem.* **420(1)**, 48-53 (2012).

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