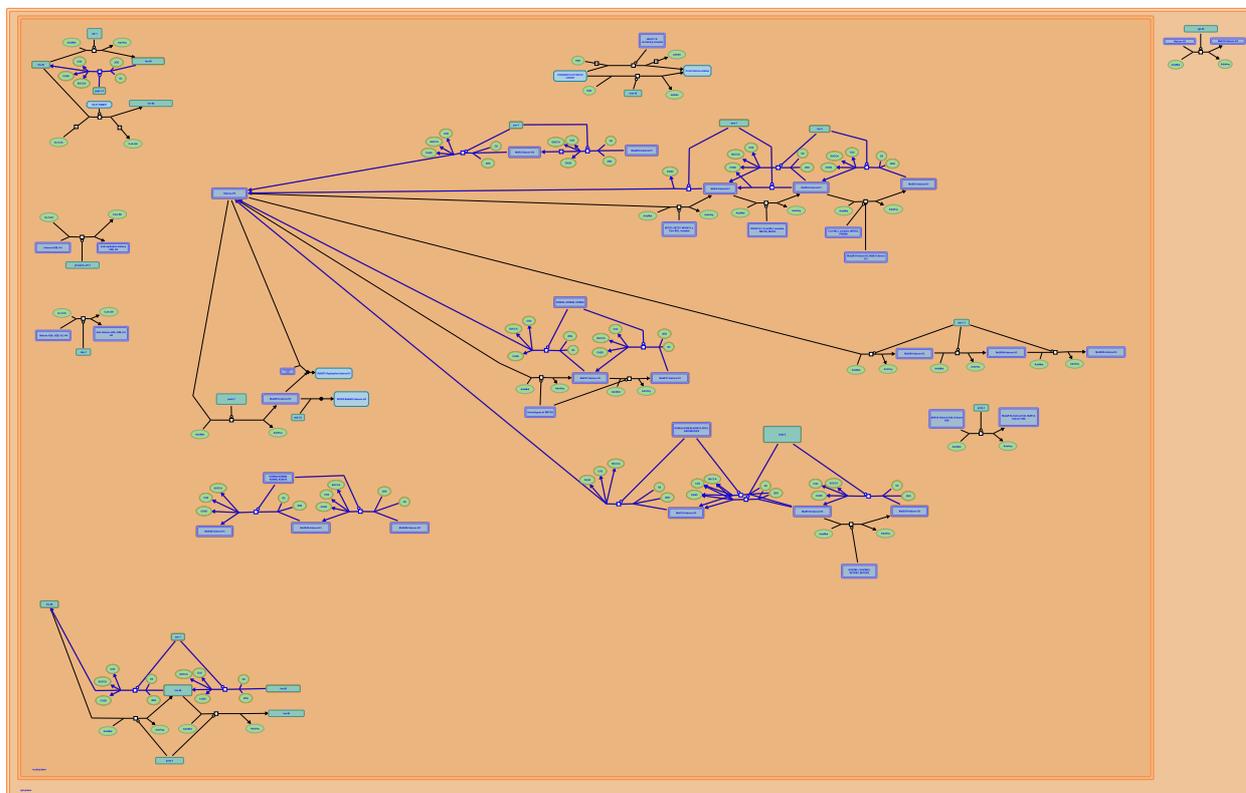


HDMs demethylate histones



European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

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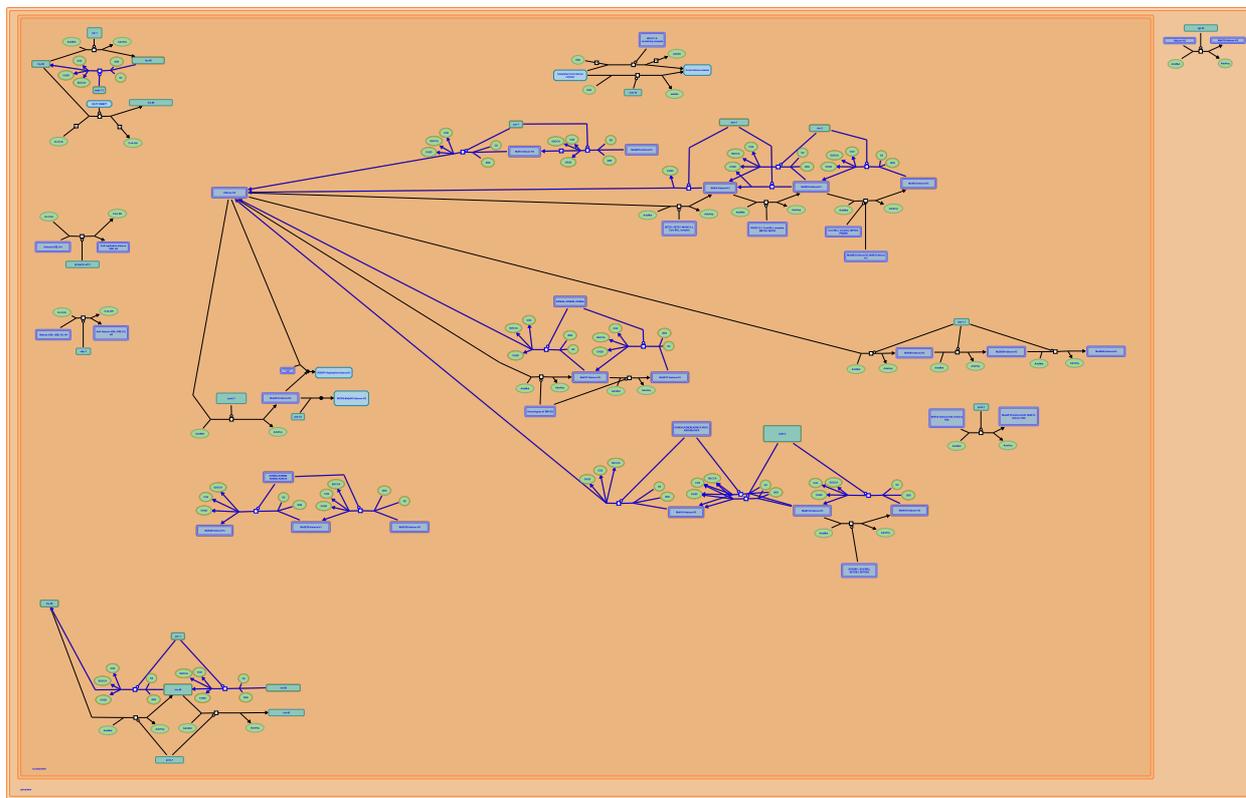
Reactome database release: 76

This document contains 1 pathway and 17 reactions ([see Table of Contents](#))

HDMs demethylate histones ↗

Stable identifier: R-CEL-3214842

Inferred from: [HDMs demethylate histones \(Homo sapiens\)](#)



 reactome

This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM1A, KDM1B demethylate MeK5-histone H3 [↗](#)

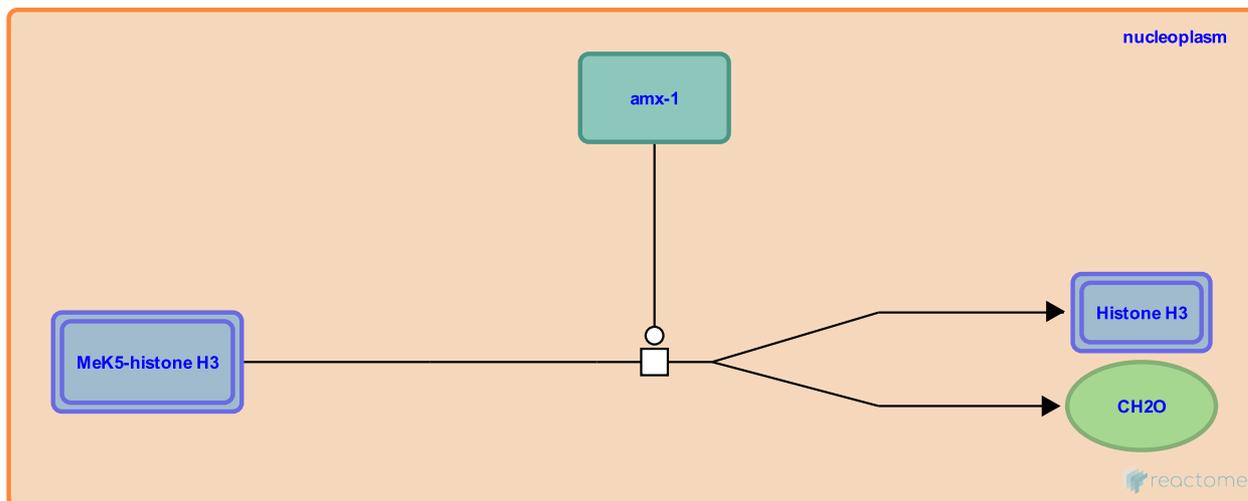
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-3214912

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM1A, KDM1B demethylate MeK5-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM1A, KDM1B demethylate Me2K5-histone H3 ↗

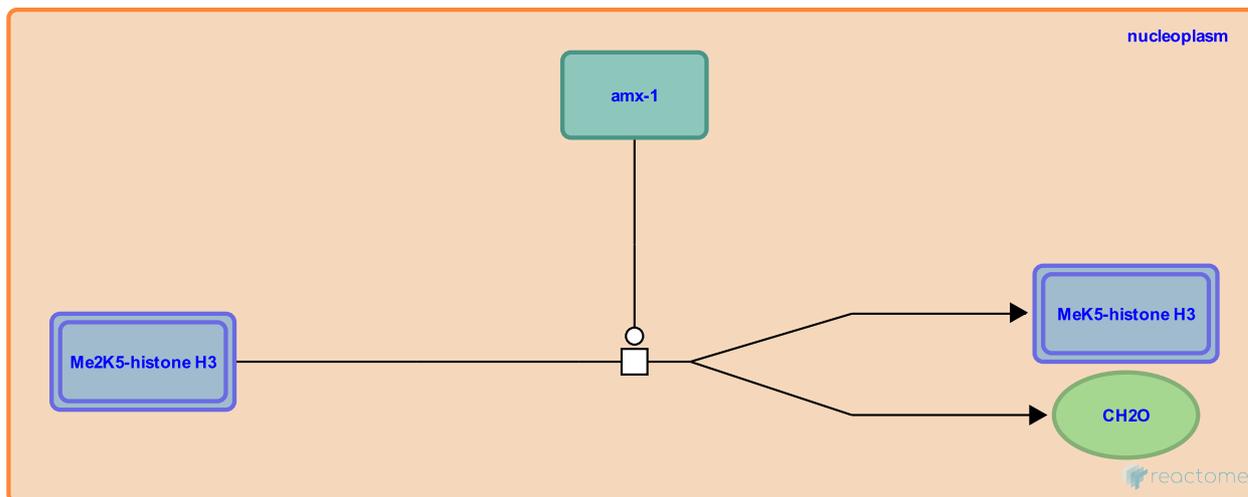
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661123

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM1A, KDM1B demethylate Me2K5-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM2A, KDM2B, KDM4A demethylate MeK37-histone H3 ↗

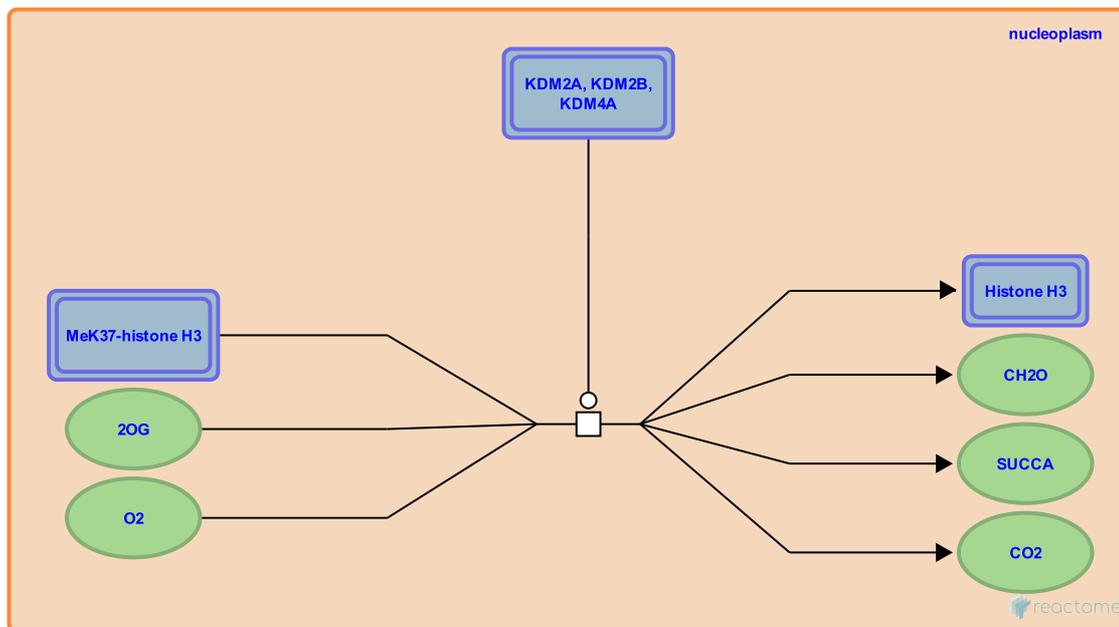
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-4722133

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM2A, KDM2B, KDM4A demethylate MeK37-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM2A, KDM2B, KDM4A demethylate Me2K37-histone H3 ↗

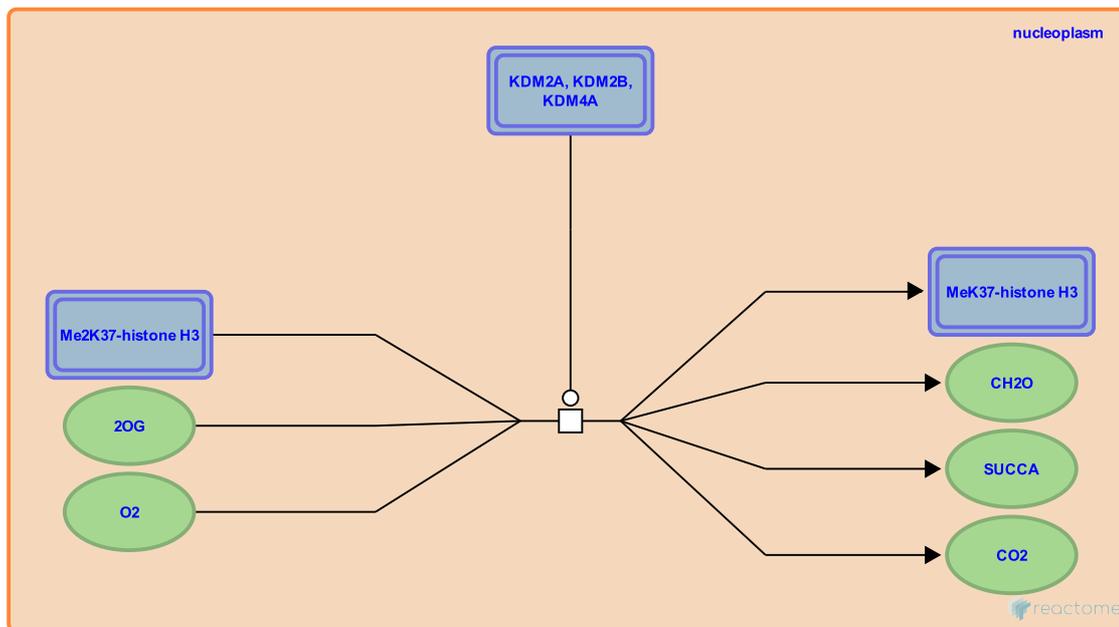
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661114

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM2A, KDM2B, KDM4A demethylate Me2K37-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM3A, KDM3B, KDM7A, PHF2:ARID5B, PHF8 demethylate MeK10-histone H3 [↗](#)

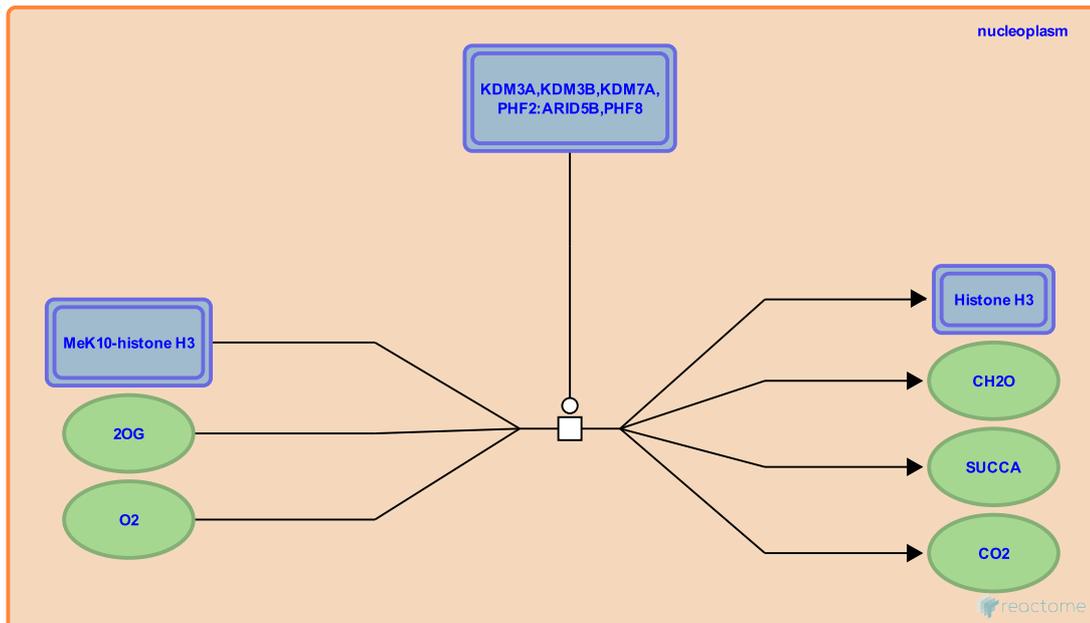
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-4724284

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM3A, KDM3B, KDM7A, PHF2:ARID5B, PHF8 demethylate MeK10-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM3A, KDM3B, KDM7A, PHF2:ARID5B, PHF8 demethylate Me2K10-histone H3 ↗

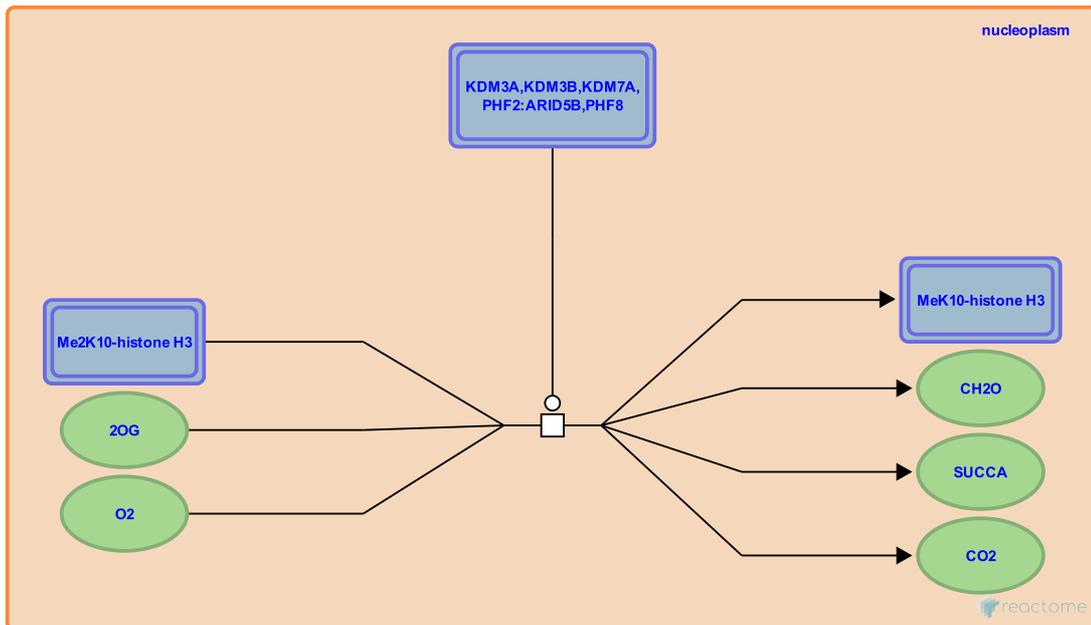
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661115

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM3A, KDM3B, KDM7A, PHF2:ARID5B, PHF8 demethylate Me2K10-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM4A, KDM4B, KDM4C, KDM4D demethylate Me2K10-histone H3 ↗

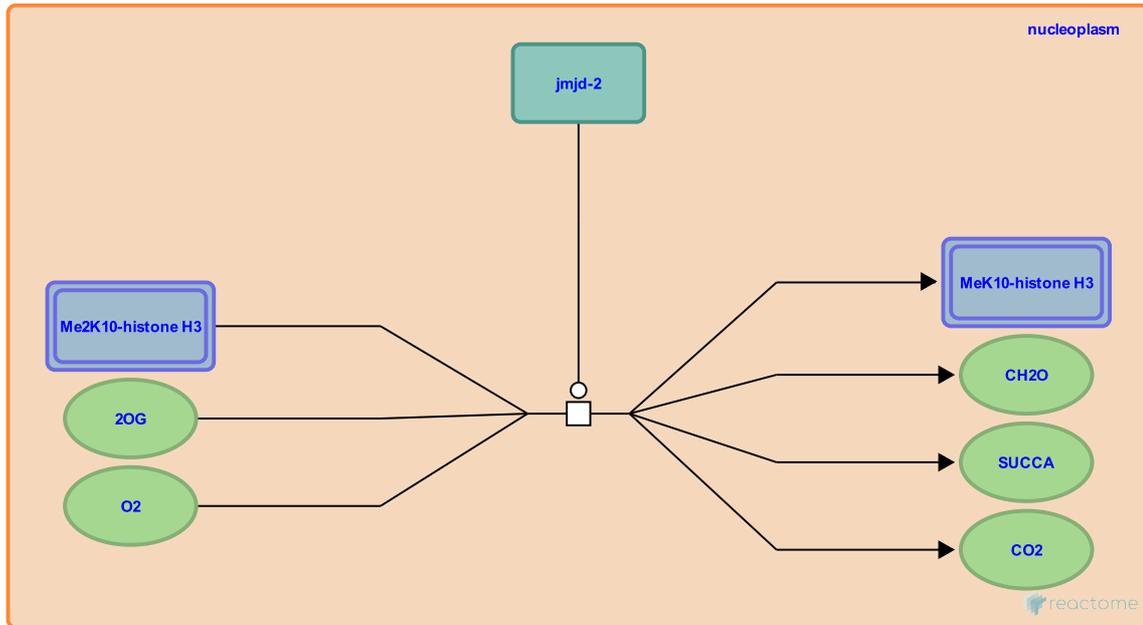
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-4724279

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM4A, KDM4B, KDM4C, KDM4D demethylate Me2K10-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM4A, KDM4B, KDM4C, KDM4D, MINA demethylate Me3K10-histone H3 ↗

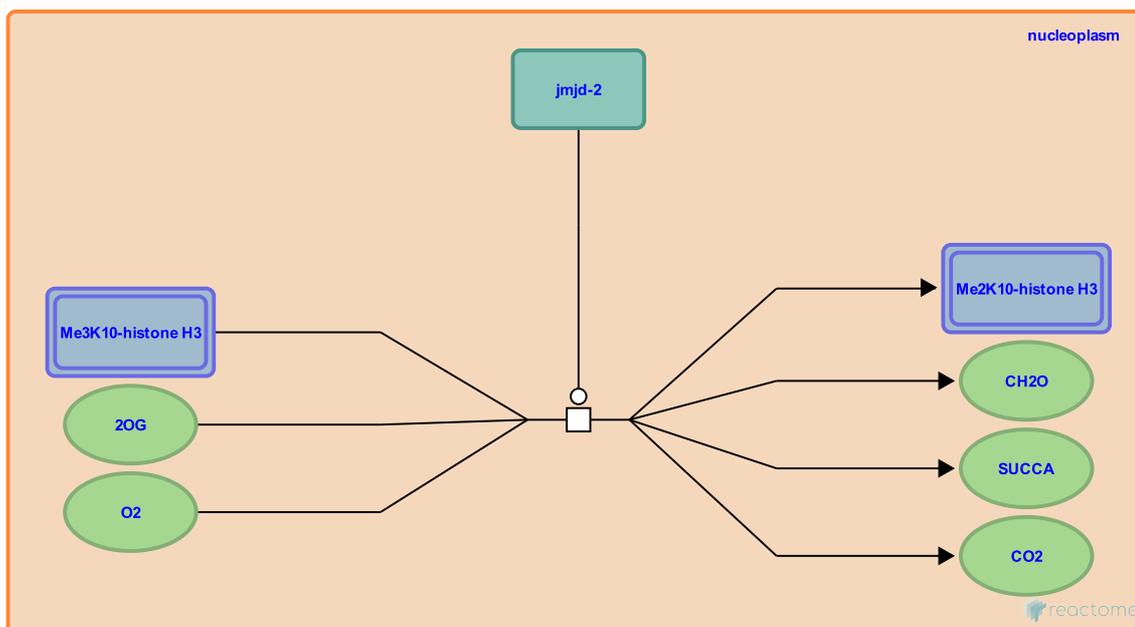
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661120

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM4A, KDM4B, KDM4C, KDM4D, MINA demethylate Me3K10-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM5A-D demethylate Me2K5-histone H3 ↗

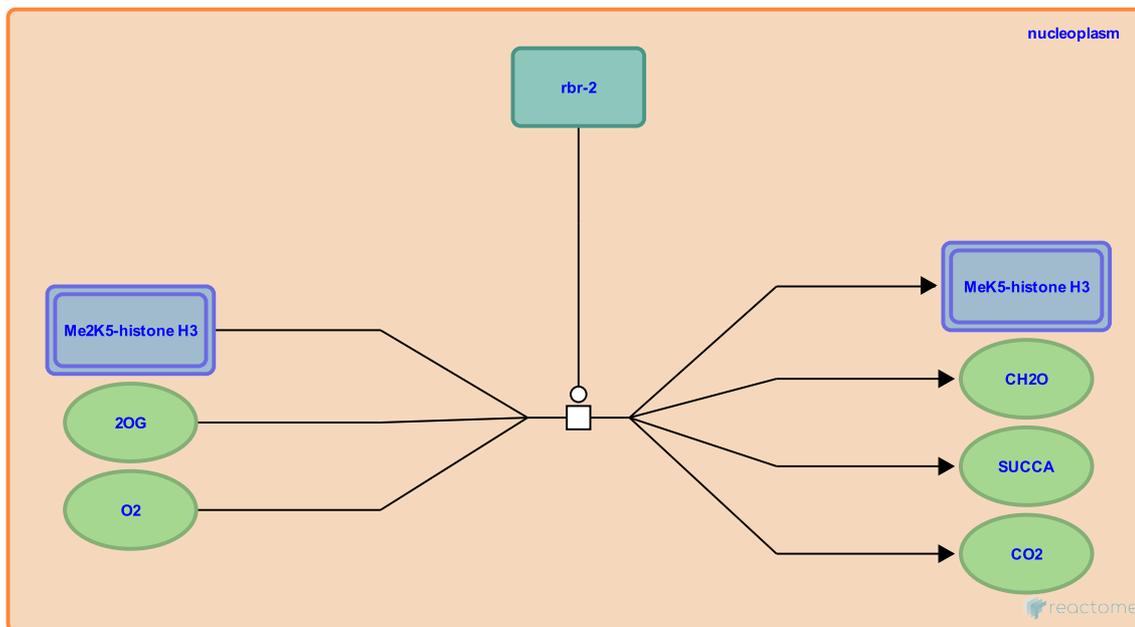
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-4754181

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM5A-D demethylate Me2K5-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM5A-D demethylate Me3K5-histone H3 ↗

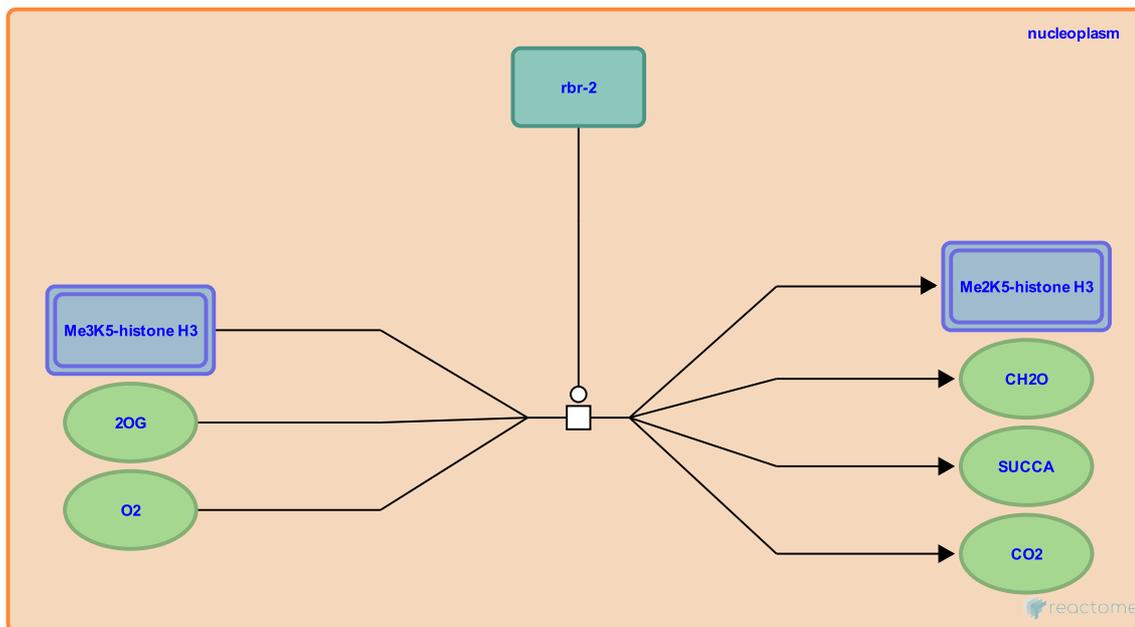
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661116

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM5A-D demethylate Me3K5-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM6A, KDM6B, KDM7A demethylate Me2K28-histone H3 ↗

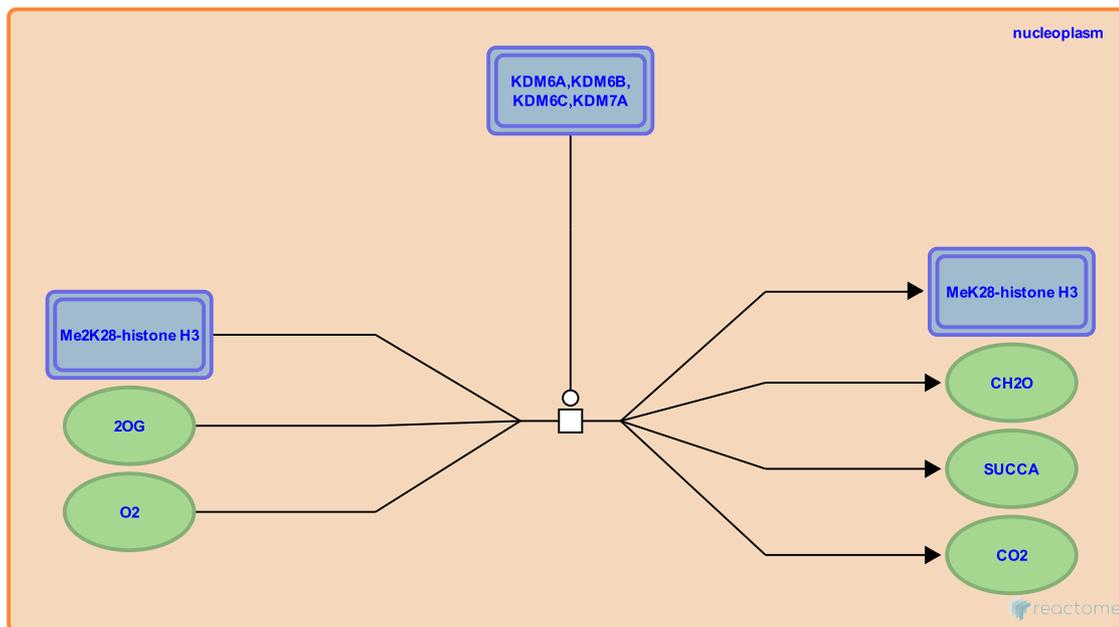
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-4754187

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM6A, KDM6B, KDM7A demethylate Me2K28-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

KDM6A, KDM6B, KDM7A demethylate Me3K28-histone H3 ↗

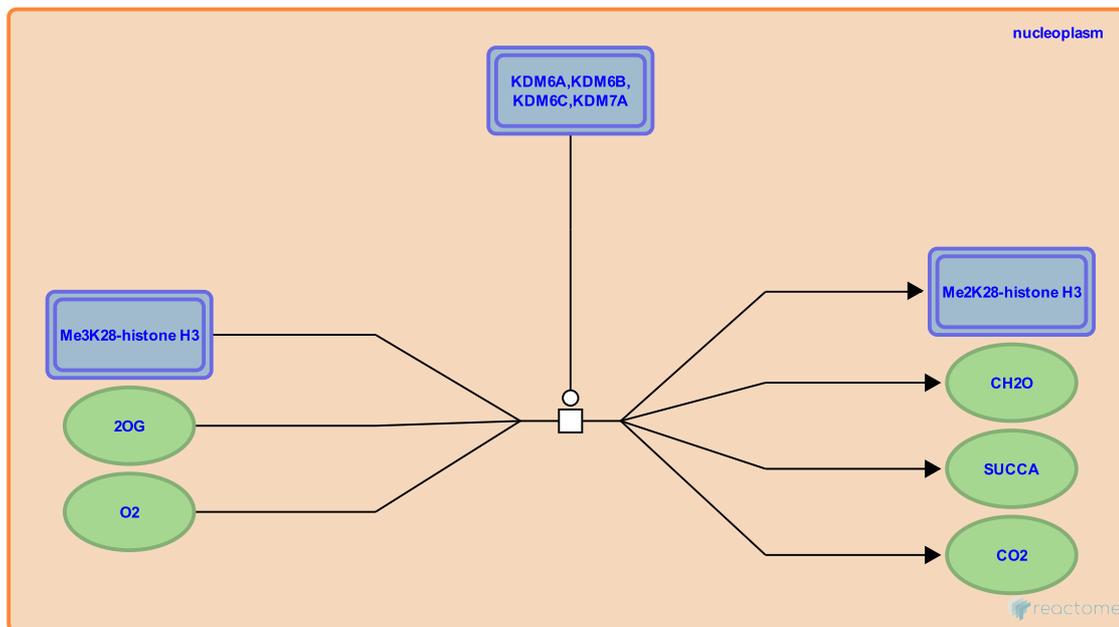
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661121

Type: transition

Compartments: nucleoplasm

Inferred from: [KDM6A, KDM6B, KDM7A demethylate Me3K28-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

JMJD6 demethylates MeR3-histone H3 [↗](#)

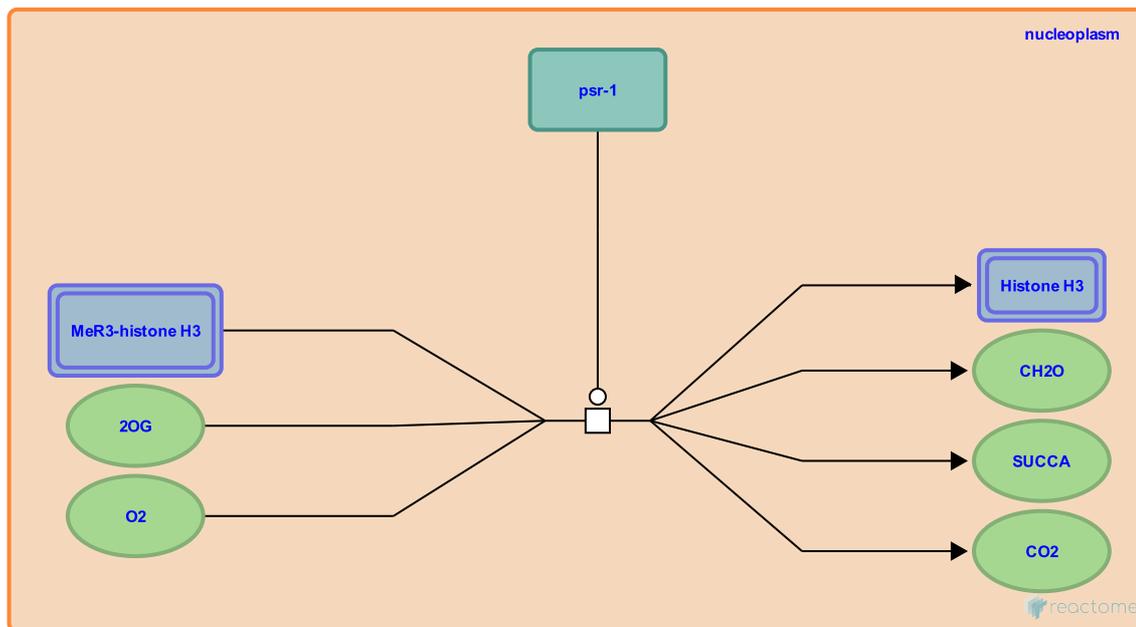
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-4754176

Type: transition

Compartments: nucleoplasm

Inferred from: [JMJD6 demethylates MeR3-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

JMJD6 demethylates Me2R3-histone H3 ↗

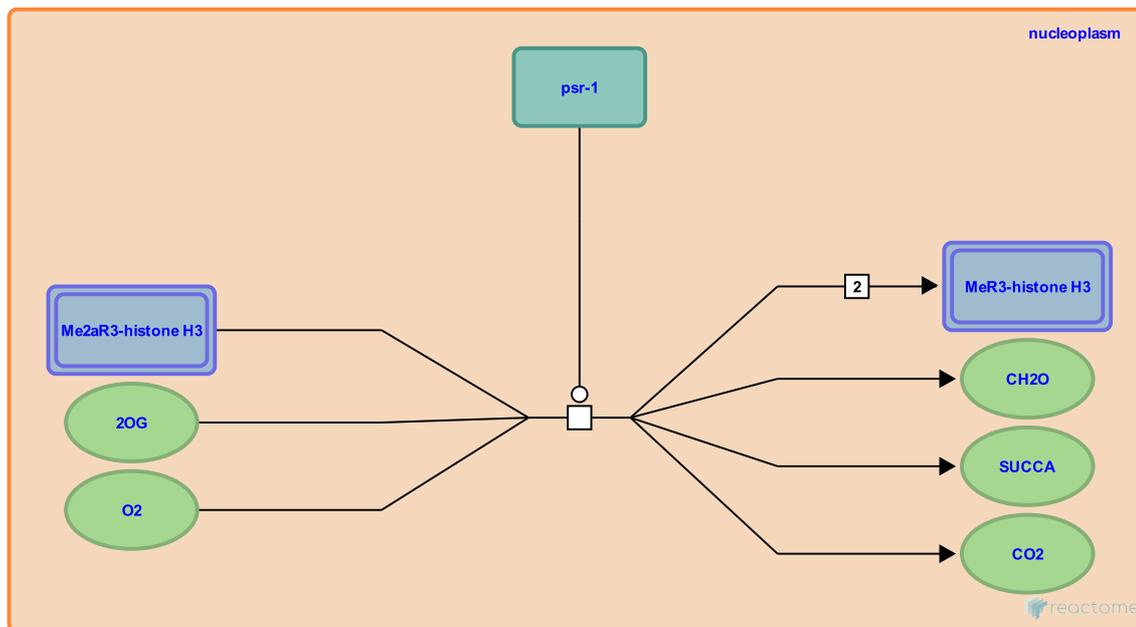
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661122

Type: transition

Compartments: nucleoplasm

Inferred from: [JMJD6 demethylates Me2R3-histone H3 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

JMJD6 demethylates Me2sR4-HIST1H4 [↗](#)

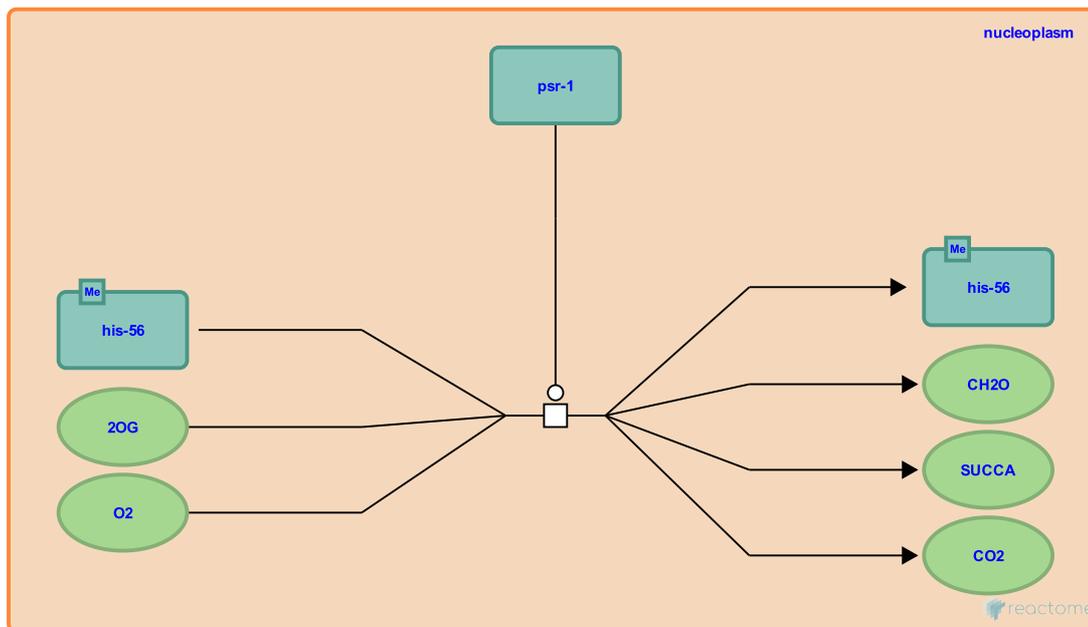
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661125

Type: transition

Compartments: nucleoplasm

Inferred from: [JMJD6 demethylates Me2sR4-HIST1H4 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

JMJD6 demethylates MeR4-HIST1H4 [↗](#)

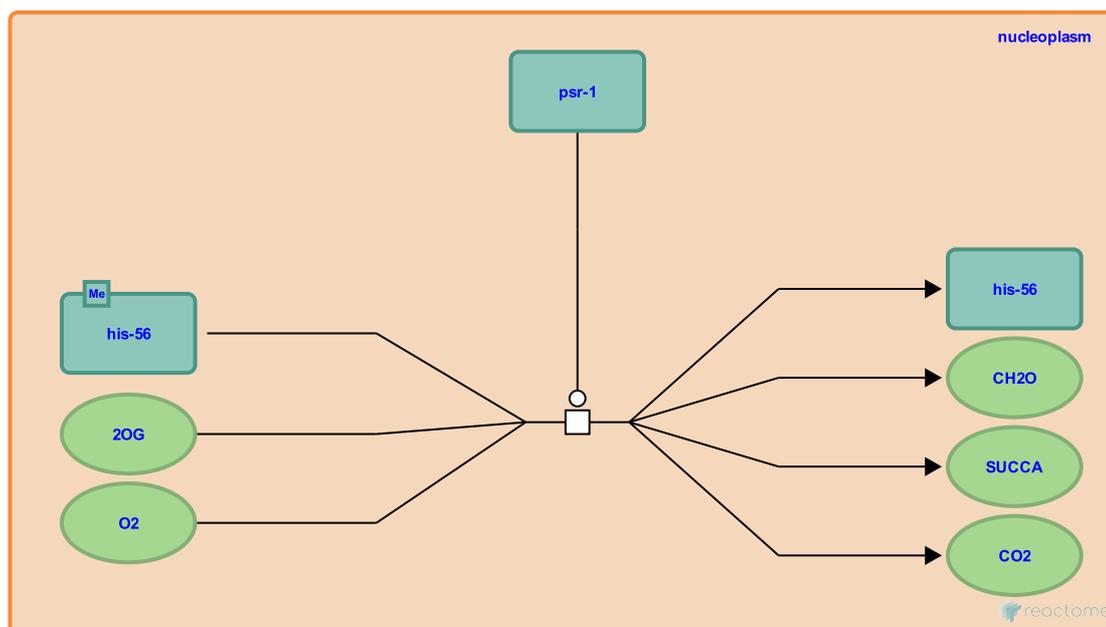
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5661124

Type: transition

Compartments: nucleoplasm

Inferred from: [JMJD6 demethylates MeR4-HIST1H4 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

PHF8 demethylates MeK21-histone H4 [↗](#)

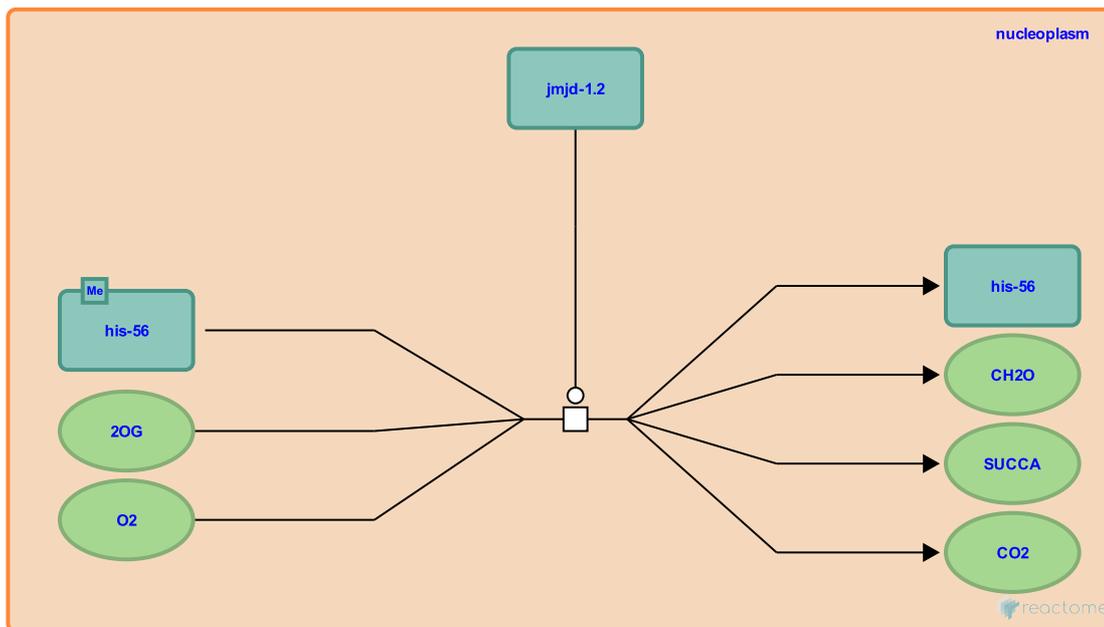
Location: [HDMs demethylate histones](#)

Stable identifier: R-CEL-5423117

Type: transition

Compartments: nucleoplasm

Inferred from: [PHF8 demethylates MeK21-histone H4 \(Homo sapiens\)](#)



This event has been computationally inferred from an event that has been demonstrated in another species.

The inference is based on the homology mapping from PANTHER. Briefly, reactions for which all involved PhysicalEntities (in input, output and catalyst) have a mapped orthologue/paralogue (for complexes at least 75% of components must have a mapping) are inferred to the other species. High level events are also inferred for these events to allow for easier navigation.

[More details and caveats of the event inference in Reactome.](/electronic_inference_compara.html) For details on PANTHER see also: <http://www.pantherdb.org/about.jsp>

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