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Datasheet for 100-401-N96

Morc3 Antibody

Overview

Description:	Anti-Morc3 (RABBIT) Antibody - 100-401-N96
Item No.:	100-401-N96
Size:	100 µL
Applications:	WB, ChIP, IF
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	The Morc (microrchidia) family of proteins are ATPases of the GHKL family. They have been implicated in transcriptional repression of genes and transposons, and higher order organization of DNA within the nucleus. Morc antibodies are ideal for researchers interested in Epigenetics, Cancer, and Cell cycle research.
Synonyms:	rabbit anti-Morc3 Antibody, MORC family CW-type zinc finger protein 3, Protein microrchidia, Morc antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	Morc3
Reactivity:	Mouse
Immunogen Type:	Recombinant Protein
Immunogen:	Morc3 whole rabbit serum was prepared by repeated immunizations with a mouse Morc3 recombinant protein.
Purity/Specificity:	Morc3 antibody was prepared from monospecific antiserum by delipidation and defibrination. The antibody is specific for mouse Morc3 in expressed cell lysates. Cross reactivity to other Morc proteins has not been determined.

Relevant Links:

- 100-401-N96 SDS
- UniProtKB - Q6A0C2
- NCBI - NP_001038994.2
- GeneID - 338467

Application Details

Tested Applications:	WB
Suggested Applications:	ChIP, IF (Based on references)
Application Note:	Anti-Morc3 Antibody is tested for use in Western Blot and suitable for ChIP and IF. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 110.8 kDa in size corresponding Morc3 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000-1:50,000
WB:	1:1000-1:5000

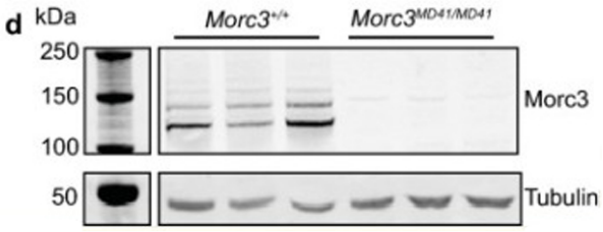
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	80 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

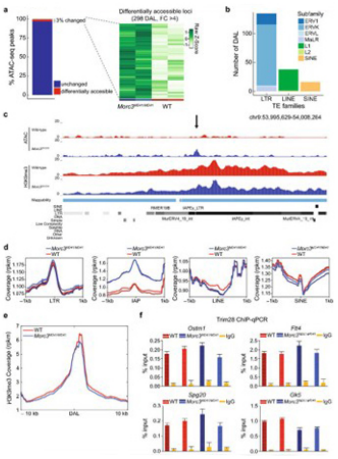
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

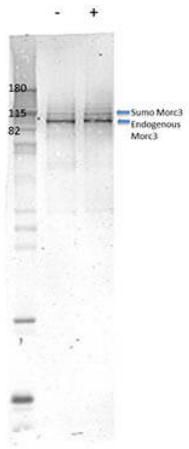
Images



Western Blot
(d) Western blot validates the loss of MORC3 (~ 110 kDa) in Morc3 MD41/MD41 mESCs (n = 3, biological replicates). Tubulin (~ 50 kDa) is shown as a loading control. The higher (> 110 kDa) bands may represent sumoylated forms of MORC3, as previously shown by Mimura et al.
Fig 1. PMID: 34706774.



ChIP
MORC3 regulates chromatin accessibility at ERVs. (a) Percentage of the total ATAC peaks (n = 11,000) that show increased chromatin accessibility (left panel) and heatmap showing the difference in chromatin accessibility between Morc3 MD41/MD41 and the WT (right panel, n = 2 biological replicates). Each row corresponds to chromatin accessibility of a single locus. (b) Barplot showing the annotation of the 298 differentially accessible loci (DAL). (c) Representative genome browser tracks showing a change in accessibility in Morc3 MD41/MD41 occurring at an LTR elements (RepeatMask track) covered with H3K9me3. The DAL is shown by the black arrow. (d) Metaplot showing the ATAC-seq coverage at LTR, IAP, LINE and SINE in WT (red) and Morc3 MD41/MD41 (blue) with 1 kb flanking region. Replicates are shown in a different shade of the same color. (e) Metaplot showing the average H3K9me3 read coverage at all DAL. (f) Trim28 ChIP-qPCR at DAL in WT (red) and Morc3 MD41/MD41 (blue). Fig 4.
PMID: 34706774.



Western Blot
Western Blot of Rabbit Anti-Morc3 antibody. Lane 1: C-Flag murine embryonic stem cells. Lane 2: C-Flag murine embryonic stem cells doxycycline induced. Load: 35 µg per lane. Primary antibody: mMorc3 antibody at 1:1000 for overnight at 4°C. Secondary antibody: IRDye800™ rabbit secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 110 kDa for mouse Morc3. Other band(s): Sumoylated Morc runs higher.

References

- Desai, VP et al. The role of MORC3 in silencing transposable elements in mouse embryonic stem cells. *Epigenetics & Chromatin* (2021)
- Groh, S et al. Morc3 silences endogenous retroviruses by enabling Daxx-mediated histone H3.3 incorporation. *Nature Communications* (2021)

Disclaimer

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