

NO66 (D7C8E) Rabbit mAb

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| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|-------------|--------------|-----------|-----------------|-------------|-----------------|
| W | H Mk | Endogenous | 78 | Rabbit IgG | #Q9H6W3 | 79697 |

Product Usage Information**Application**

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

NO66 (D7C8E) Rabbit mAb recognizes endogenous levels of total NO66 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human NO66 protein.

Background

Nucleolar protein 66 (NO66), also known as Myc-associated protein with a jumonji C (JmjC) domain (MAPJD), or ribosomal oxygenase 1, belongs to a large family of JmjC-domain-containing oxygenase proteins. NO66 exhibits both ribosomal histidine hydroxylase and histone demethylase activities, and plays a key role in regulation of gene transcription, RNA processing, and translation. NO66-mediated hydroxylation of ribosomal protein L8 (Rpl8) may play a role in regulation of protein synthesis (1). NO66 also functions to repress transcription by demethylating histone H3 lys4 and lys36, two histone marks that are important for transcriptional activation (2). The interaction of NO66 with the transcription factor osterix (OSX) regulates osteoblast differentiation and bone formation through repression of OSX target genes (3,4). In embryonic stem cells, the PHF19 protein recruits NO66 along with polycomb repressor complex 2 (PRC2) to differentiation-specific target genes to repress transcription through demethylation of histone H3 lys36 and methylation of histone H3 lys27, the latter mark being associated with transcriptional repression (2). NO66 is overexpressed in non-small cell lung cancer and colorectal cancer, and is associated with poor prognosis (5,6).

Background References

1. Ge, W. et al. (2012) *Nat Chem Biol* 8, 960-962.
2. Brien, G.L. et al. (2012) *Nat Struct Mol Biol* 19, 1273-81.
3. Sinha, K.M. et al. (2010) *EMBO J* 29, 68-79.
4. Sinha, K.M. et al. (2014) *J Bone Miner Res* 29, 855-65.
5. Suzuki, C. et al. (2007) *Mol Cancer Ther* 6, 542-51.
6. Nishizawa, Y. et al. (2017) *Ann Surg Oncol* 24, 841-849.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **Mk:** Monkey

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