
N6-methyladenosine (m6A) Monoclonal Antibody, clone 2H6

(Catalog A-1802)

Background

N6-methyladenosine (m6A) is the most common and abundant modification in RNA molecules present in eukaryotes. The m6A modification is catalyzed by a methyltransferase complex METTL3 and removed by the recently discovered m6A RNA demethylases FTO and ALKBH5, which catalyze m6A demethylation in an α -ketoglutarate (α -KG)- and Fe^{2+} -dependent manner. It was shown that METTL3, FTO, and ALKBH5 play essential roles in many biological processes, ranging from development and metabolism to fertility. m6A accounts for more than 80% of all RNA base methylations and exists in various species. m6A is mainly distributed in mRNA and also occurs in non-coding RNA such as tRNA, rRNA, and snRNA. The relative abundance of m6A in mRNA transcripts has been shown to affect RNA metabolism processes such as splicing, nuclear export, translation ability and stability, and RNA transcription. Abnormal m6A methylation levels induced by defects in m6A RNA methylase and demethylase could lead to dysfunction of RNA and diseases. For example, abnormally low levels of m6A in target mRNAs due to increased FTO activity in patients with FTO mutations, through an as-yet-undefined pathway, contributes to the onset of obesity and related diseases. The dynamic and reversible chemical m6A modification in RNA may also serve as a novel epigenetic marker of profound biological significance. Therefore, more useful information for a better understanding of m6A RNA methylation levels and distribution on RNA transcripts could benefit diagnostics and therapeutics of disease.

Description

N6-methyladenosine (m6A) Monoclonal Antibody, clone 2H6. Unconjugated. Raised in: Rabbit.

Formulation

Buffer: PBS with 0.01% thiomersal, 0.05% BSA, 50% glycerol, pH7.3.

Specificity

Human, Mouse, Rat, Broad Range

Isotype

IgG

Purification

Affinity purified

Immunogen

Chemical compounds corresponding to N6-methyladenosine / m6A

Storage

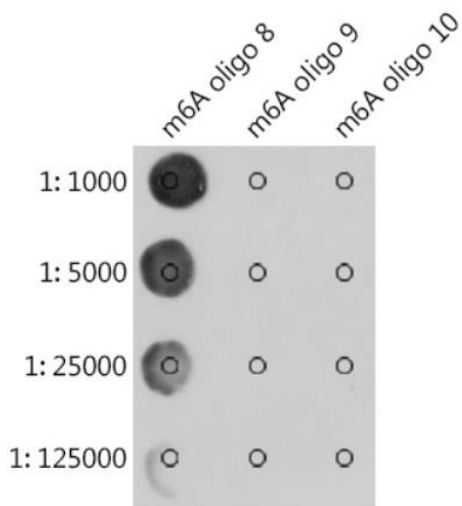
Shipped at 4°C. Upon delivery store at 20°C or -80°C. Avoid repeated freeze.

Alternative Names

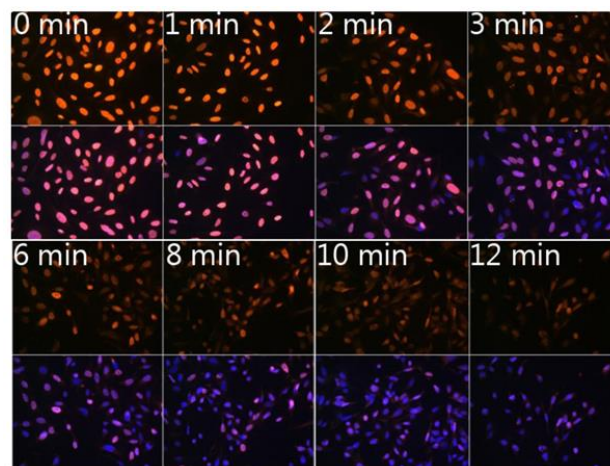
Anti-N6-methyladenosine, N6-methyladenosine, N6(methylnitroso)adenosine, m6A, N6-methyladenosine, 6mA

Application

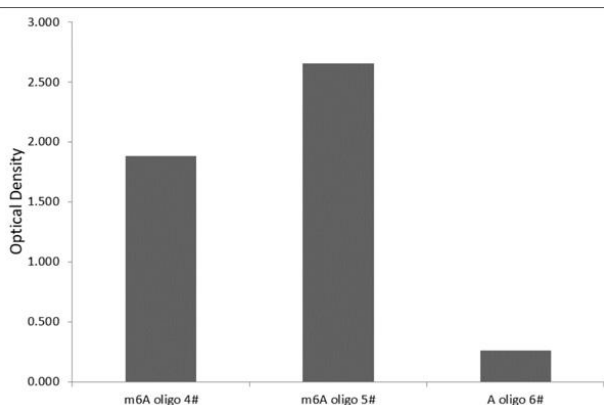
ELISA, DB, IF, MeRIP, Nucleotide Array; Recommended dilution: DB: 1:500 - 1:2000, IF: 1:50 - 1:200; meRIP 1:50 - 1:200



The m6A rabbit monoclonal antibody was tested in Dot Blot against N6-methyladenosine (m6A) and unmodified adenosine. Oligomer 8 - ATAACTGG-m6ACCGAATGG
 Oligomer 9 - ATAACTGGACCGAATGG
 Oligomer 10 - AAAAAAAAAAAAAAAAAAbiotin.



U2OS cells pre-treated with BrdU were subjected to UVC irradiation incubated at 37 °C for the indicated time, and stained for N6-methyladenosine (m6A) Monoclonal Antibody. DAPI, 4',6-diamidino-2-phenylindole. Global UVC irradiation exceed cytoplasmic level, peaking at 2 min after irradiation and diminishing over the following 8 min.



The m6A rabbit monoclonal antibody (4µg) was tested in Nucleotide Array against N6-methyladenosine (m6A) and unmodified adenosine (100pmol for each oligomer). Oligomer 4 - N6-methyladenosine (m6A-UAACUGGACCGAAUGG-Biotin)
 Oligomer 5 - N6-methyladenosine (AUAACUGG-m6A-CCGAAUGG-Biotin)
 Oligomer 6 - unmodified adenosine (AUAACUGGACCGAAUGG-Biotin)