

Rev05
 Update: Aug,31,2026

DATASHEET

DNA-RNA Hybrid Antibody (S9.6), mAb, Mouse

Cat. No.: A02184

Overview

Specificity	DNA-RNA Hybrid Antibody (S9.6), mAb, Mouse
Host Species	Mouse
Immunogen	DNA-RNA Hybrid
Conjugate	Unconjugated

Applications

Working concentrations for specific applications should be determined by the investigators. The appropriate concentrations may be affected by secondary antibody affinity, antigen concentration, the sensitivity of the method of detection, temperature, the length of the incubations, and other factors. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Application	Recommended Usage
ELISA	0.5-2 µg/ml
Dot blot	Li-Hong Zhang et al. (2020) The SUMOylated METTL8 Induces R-loop and Tumorigenesis via m3C. iScience. PMID: 32199293
Immunohistochemistry (IHC)	John A Smolka et al. (2021) Recognition of cellular RNAs by the S9.6 antibody creates pervasive artefacts when imaging RNA:DNA hybrids. J Cell Biol. PMID: 33830170
Immunoprecipitation (IP)	László Halász et al. (2017) RNA-DNA hybrid (R-loop) immunoprecipitation mapping: an analytical workflow to evaluate inherent biases. Genome Res. PMID: 28341774

Properties

Form	Lyophilized
Storage Buffer	Lyophilized with PBS, pH 7.2, containing 0.02% sodium azide.

Reconstitution	Reconstitute the lyophilized powder with deionized water (or equivalent) to a final concentration of 0.5 mg/mL.
Storage Instructions	The lyophilized product remains stable for 1 year at -20°C from the date of receipt. Upon reconstitution, it can be stored for 2-3 weeks at 2-8°C or for 12 months at -20°C or below. Avoid freeze/thaw cycles.
Purification	Protein A affinity column
Isotype	Mouse IgG2a, κ
Clonality	Monoclonal
Clone ID	S9.6
Note	GenScript can customize this product per customer's request including product size, buffer components, etc.

Background

Target Background : RNA-DNA hybrid is formed via hybridization of single stranded RNA (ssRNA) to a complementary strand of a DNA duplex. It is emerging as a significant cause of genome instability in biological systems ranging from bacteria to mammals. R-loops are local RNA-DNA hybrid sequences formed by a nascent G-rich transcript hybridizing with the DNA template strand. Anti-DNA-RNA Hybrid [S9.6] Antibody is useful in the detection and purification of R-loop structures. [S9.6] Antibody can be used to develop immunoassay for detecting virus RNA. The original S9.6 antibody was generated against a ΦX174 bacteriophage-derived synthetic DNA–RNA antigen. GenScript DNA-RNA Hybrid Antibody (S9.6), mAb, Mouse is recombinant mouse monoclonal antibody, purified from cell culture free from animal-derived components.

Synonyms : DNA-RNA Hybrid

Reference : First publication: Boguslawski et al. (1986) Characterization of monoclonal antibody to DNA:RNA and its application to immunodetection of hybrids. J Immunol Methods. PMID:2422282

Chromatin Immunoprecipitation (ChIP): Yujia A. Chan et al. (2014) Genome-Wide Profiling of Yeast DNA:RNA Hybrid Prone Sites with DRIP-Chip. PLoS Genet. PMID: 24743342

Dot Blot: Li-Hong Zhang et al. (2020) The SUMOylated METTL8 Induces R-loop and Tumorigenesis via m3C. iScience. PMID: 32199293

Immunocytochemistry: John A Smolka et al. (2021) Recognition of cellular RNAs by the S9.6 antibody creates pervasive artefacts when imaging RNA:DNA hybrids. J Cell Biol. PMID: 33830170

Immunoprecipitation: László Halász et al. (2017) RNA-DNA hybrid (R-loop) immunoprecipitation mapping: an analytical workflow to evaluate inherent biases. Genome Res. PMID: 28341774

Immunoassay: Sen Ding et al. (2015) Establishment of immunoassay for detecting HPV16 E6 and E7 RNA. Sci Rep. PMID: 26333509

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