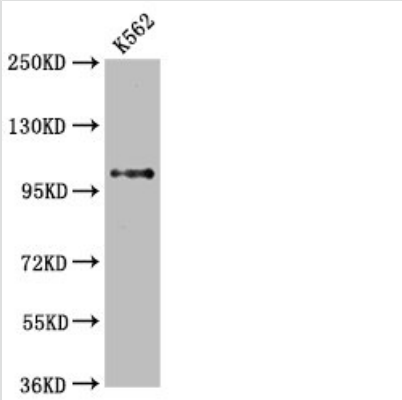
DGCR8 Recombinant Monoclonal Antibody

Product Code	CSB-RA845175A0HU
Abbreviation	Microprocessor complex subunit DGCR8
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q8WYQ5
Immunogen	A synthesized peptide derived from human DGCR8
Species Reactivity	Human
Tested Applications	ELISA, WB; Recommended dilution: WB:1:500-1:5000
Relevance	Component of the microprocessor complex that acts as a RNA- and heme-binding protein that is involved in the initial step of microRNA (miRNA) biogenesis. Component of the microprocessor complex that is required to process primary miRNA transcripts (pri-miRNAs) to release precursor miRNA (pre-miRNA) in the nucleus. Within the microprocessor complex, DGCR8 function as a molecular anchor necessary for the recognition of pri-miRNA at dsRNA-ssRNA junction and directs DROSHA to cleave 11 bp away form the junction to release hairpin-shaped pre-miRNAs that are subsequently cut by the cytoplasmic DICER to generate mature miRNAs (PubMed:26027739, PubMed:26748718). The heme-bound DGCR8 dimer binds pri-miRNAs as a cooperative trimer (of dimers) and is active in triggering pri-miRNA cleavage, whereas the heme-free DGCR8 monomer binds pri-miRNAs as a dimer and is much less active. Both double-stranded and single-stranded regions of a pri-miRNA are required for its binding (PubMed:15531877, PubMed:15574589, PubMed:15589161, PubMed:16751099, PubMed:16906129, PubMed:16963499, PubMed:17159994). Specifically recognizes and binds N6-methyladenosine (m6A)-containing pri-miRNAs, a modification required for pri-miRNAs processing (PubMed:25799998). Involved in the silencing of embryonic stem cell self-renewal (By similarity).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Alias	Microprocessor complex subunit DGCR8, DiGeorge syndrome critical region 8, DGCR8, C22orf12, DGCRK6, LP4941
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling
Gene Names	DGCR8

Clone No. 2H2

Image



Western Blot
Positive WB detected in: K562 whole cell lysate
All lanes: DGCR8 antibody at 2.65μg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 87, 33, 83 KDa
Observed band size: 100 KDa

Description

The recombinant DGCR8 antibody is a monoclonal antibody made in vitro using the DGCR8 antibody genes that are typically expressed from a plasmid in a stable mammalian cell line. The genes coding for the DGCR8 antibody will ultimately assemble into a fully functional antibody after translation. The synthesized antibody is the recombinant antibody against DGCR8. It underwent purification using affinity-chromatography. This recombinant DGCR8 antibody is suitable for use in the ELISA, WB to detect the DGCR8 protein from Human.

DGCR8 is an allele located in the ql1.2 region of human chromosome 22. It is associated with DiGeorge Syndrome (DGCS), so it is named DGCR83. DGCR8 is an RNA-binding protein involved in the synthesis of microRNAs. In the synthesis of microRNAs, it binds pri-microRNAs and promotes the cleavage of Drosha by interacting with Drosha and stabilizing microprocessors, which regulate the production of microRNAs and affect the proliferation, migration, and invasion of tumors4,5. The high expression of DGCR8 promotes the occurrence, development, and metastasis of cancer, including kidney clear cell carcinoma, thyroid carcinoma, and ovarian cancer. DGCR8 is abnormally expressed in TNBC specimens. Besides, the knockdown of DGCR8 inhibited cell migration and invasion in TNBC cells, while the overexpression of DGCR8 promoted cell migration and invasion in TNBC cells. The above results indicated that DGCR8 promotes the metastasis of TNBC and may act as an oncogene.