

## Anti-AKR1C1 Antibody

Catalog Number: A03056-1

### About AKR1C1

RRM2B/p53-R2, or p53-inducible ribonucleotide reductase small subunit 2-like protein, is a member of a broad superfamily of ferritin-like di-iron-carboxylate proteins. The RRM2B protein is an enzyme that catalyzes the conversion of ribonucleotides to deoxyribonucleotides that are essential for DNA synthesis, and is found in all eukaryotes. RRM2B plays a pivotal role in cell survival by repairing damaged DNA in a p53/TP53-dependent manner. It supplies deoxyribonucleotides for DNA repair in cells arrested at G1 or G2. It contains an iron-tyrosyl free radical center required for catalysis, and forms an active ribonucleotide reductase (RNR) complex with RRM1 which is expressed both in resting and proliferating cells in response to DNA damage. It is a heterotetramer with a large (RRM1) subunit, and interacts with p53/TP53. The interaction with RRM1 occurs in response to DNA damage and results in its translocation from cytoplasm to nucleus. It is widely expressed at a high level in skeletal muscle and at a weak level in thymus, and expressed in epithelial dysplasias and squamous cell carcinoma. Defects in RRM2B are the cause of encephalomyopathic mitochondrial depletion syndrome with renal tubulopathy (EMDSRT). Mitochondrial DNA depletion syndrome (MDS) is a clinically heterogeneous group of disorders characterized by a reduction in mitochondrial DNA (mtDNA) copy number. The encephalomyopathic form with renal tubulopathy is presented with various combinations of hypotonia, tubulopathy, seizures, respiratory distress, diarrhea, and lactic acidosis.

### Overview

Product Name	Anti-AKR1C1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-AKR1C1 Antibody catalog # A03056-1. Tested in WB applications. This antibody reacts with Human,Mouse,Rat.
Application	WB
Clonality	Polyclonal
Formulation	Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2
Storage Instructions	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	Q04828

### Technical Details

Immunogen	Anti-Human RRM2B/p53R2 antibody was prepared by repeated immunizations with a synthetic peptide corresponding to a region near the N-terminus of human RRM2B1 protein. A residue of cysteine was added to facilitate coupling.
Predicted Reactive Species	Boar, Bovine, Canine, Golden Hamster
Isotype	IgG

Form	Liquid
Concentration	0.82 mg/mL by UV absorbance at 280 nm
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>WB: 1:500-1:1000</p>

## Anti-AKR1C1 Antibody (A03056-1) Images

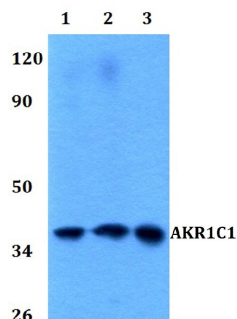


Figure 1. Western blotting validation for Anti-AKR1C1 Antibody A03056-1

Western blot (WB) analysis of AKR1C1 polyclonal antibody at 1:500 dilution

Lane1:HEK293T whole cell lysate

Lane2:Raw264.7 whole cell lysate

Lane3:PC12 whole cell lysate

Electrophoresis was performed on a SDS-PAGE gel. To determine SDS-PAGE gel concentration

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