

RUO DATA SHEET

ARD1

Concentrated Rabbit Monoclonal Antibody

Intended Use:

For Research Use Only (RUO)

Epitomics' Rabbit Monoclonal Anti-Human ARD1, Clone EP357, is intended for use to qualitatively identify ARD1 by light microscopy in sections of formalin-fixed, paraffin-embedded tissue using immunohistochemical detection methodology.

Catalog number	Description	Dilution
AC-0343RUO	0.1 ml, concentrated	1:100-1:200
AC-0343RUOB	0.5 ml, concentrated	1:100-1:200
AC-0343RUOC	1 ml, concentrated	1:100-1:200
AC-0343RUOBULK	2 ml or more, concentrated	1:100-1:200

Immunogen:	A synthetic peptide corresponding to residues of human ARD1 protein
Source:	Rabbit Monoclonal Antibody
Clone ID:	EP357
Isotype:	Rabbit IgG
Application:	Immunohistochemistry for formalin-fixed paraffin-embedded tissue

Summary and Explanation:

Arrest-defect-1 protein (ARD1) is the catalytic subunit of NatA acetyltransferase responsible for N-terminal α -acetylation. ARD1 is present in the cytoplasm and nucleus, and is also required for cellular proliferation. *In vitro* studies demonstrated impaired cell proliferation in HepG2 hepatocellular carcinoma cells.

Its role in tumorigenesis is under debate. ARD1 was reported to have both oncogenic and tumor suppressor function. ARD1 acetylates β -catenin, promoting lung cancer proliferation. Conversely, it was also shown to suppress tumor migration and invasion through acetylation of myosin light chain kinase.

Recent studies demonstrated upregulation of ARD1 in tumor tissue compared with matched normal tissues in colorectal and breast cancers. However, the use of ARD1 as a prognostic marker is still controversial. Studies reported ARD1 expression correlating with breast cancer progression and metastasis while another observed ARD1 association with better clinical outcome and fewer lymph node metastases in a different breast cancer cohort. Further investigation will be required to clarify its prognostic potential.

Reagent Provided:

Antibody to ARD1 is affinity purified and diluted in 10 mM phosphate buffered saline (PBS), pH 7.2 containing 1% bovine serum albumin (BSA) and 0.09% sodium azide (NaN_3).

Storage and Stability:

Store at 2-8 °C. Do not use after expiration date provided on the vial. End user must validate any storage conditions other than those specified.

Procedures Recommended:

- 1. Pretreatment:** Epitope retrieval using Tris/EDTA buffer (catalog #: SP-0004) with a pressure cooker.
- 2. Endogenous peroxidase block:** Block for 10 minutes at room temperature using peroxidase solution (catalog #: SP-0002).
- 3. Protein block:** Block for 10 minutes at room temperature using blocking solution (catalog #: SP-0003).
- 4. Primary antibody:** Incubate for 30 minutes.
- 5. Detection:** Follow instructions from the selected detection system (EpiPrecision™, a Biotin Streptavidin-HRP Detection, catalog #: DK-0001, 0003, or EpiVision™, a Rabbit Polymer Detection, catalog # DK-0002, 0004).

The antibody dilution and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory.

Performance Characteristics:

This antibody gives cytoplasm and nucleus staining in positive cells. The recommended positive controls are breast for normal tissue and invasive ductal carcinoma for abnormal tissue.

Limitations:

Immunohistochemistry is a complex process. Variation in tissue selection, tissue processing, antigen retrieval, peroxidase activity, detection systems and improper counterstaining may cause variation in results.

References:

1. Kuo HP, *et al.*: *Am J Transl Res*. 2010;2(1):56-64.
2. Lim JH, *et al.*: *Cancer Res*. 2006;66(22):10677-82.
3. Wang ZH, *et al.*: *Asian Pac J Cancer Prev*. 2011;12(8):1973-7.

