Revision 1

Store at -20C

#65552

L-asparaginase/ASRGL1 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H R Mk	Endogenous	41	Rabbit	#Q7L266	80150

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

L-asparaginase/ASRGL1 Antibody recognizes endogenous levels of total L-asparaginase/ASRGL1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human L-asparaginase/ASRGL1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

L-asparaginase (ASRGL1) catalyzes the conversion of L-asparagine to L-aspartate. Research studies have shown that intracellular asparagine can suppress apoptosis in a large number of human tumors (1). In addition, acute lymphocytic leukemia cells frequently depend upon serum asparagine for their viability, as they lack asparagine synthetase (ASNS). Deprivation of asparagine by L-asparaginase has therefore been developed as a therapeutic treatment for acute lymphocytic leukemia (2-3). In *KRAS* mutant non-small cell lung carcinoma (NSCLC) cells, PI3K/Akt signaling was shown to be required for *ASNS* expression, suggesting combinatorial Akt inhibition and L-asparaginase treatment as a therapeutic strategy for NSCLC (3). Research studies on a breast cancer model have furthermore shown that restriction of asparagine can suppress cancer metastasis (4).

Background References

1. Zhang, J. et al. (2014) *Mol Cell* 56, 205-18.
2. Loayza-Puch, F. et al. (2016) *Nature* 530, 490-4.
3. Gwinn, D.M. et al. (2018) *Cancer Cell* 33, 91-107.e6.
4. Knott, S.R.V. et al. (2018) *Nature* 554, 378-81.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **R:** Rat **Mk:** Monkey

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Limited Uses

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