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#20843

# Asparagine Synthetase Antibody



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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 M	Endogenous	64	Rabbit	#P08243	440

## Product Usage Information

### Application

Western Blotting

### Dilution

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

Asparagine Synthetase Antibody recognizes endogenous levels of total asparagine synthetase protein.

## Source / Purification

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

## Background

Asparagine synthetase (ASNS) catalyzes the synthesis of asparagine from aspartate and glutamine. Research studies have shown that intracellular asparagine can suppress apoptosis in a large number of human tumors. In addition, ASNS expression levels have been associated with the progression of gliomas and neuroblastomas in patients (1). Furthermore, acute lymphocytic leukemia cells frequently depend upon serum asparagine for their viability, as they lack ASNS (2). Deprivation of asparagine by L-asparaginase has therefore been developed as a therapeutic treatment for acute lymphocytic leukemia (2,3). In subsets of gastric and hepatic cancers, ASNS promoter hypermethylation correlates with low ASNS expression, sensitizing these cancers to the asparaginase treatment (4).

## Background References

1. Zhang, J. et al. (2014) *Mol Cell* 56, 205-18.
2. Gwinn, D.M. et al. (2018) *Cancer Cell* 33, 91-107.e6.
3. Loayza-Puch, F. et al. (2016) *Nature* 530, 490-4.
4. Li, H. et al. (2019) *Nat Med* 25, 850-60.

## 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human **M:** Mouse

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