

NUB1 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 R Mk	Endogenous	78	Rabbit	#Q9Y5A7	51667

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

NUB1 Antibody recognizes endogenous levels of total NUB1 protein. Based upon sequence alignment, this antibody is predicted to detect both NUB1 and NUB1L.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human NUB1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Both the NEDD8 ultimate buster 1 (NUB1) and the related NUB1L isoform are interferon-inducible adaptor proteins that negatively regulate ubiquitin-like protein NEDD8 (1,2). NUB1 protein contains an amino terminal ubiquitin-like (UBL) domain and multiple carboxy terminal ubiquitin-associated (UBA) domains. The NUB1L isoform is generated by alternative splicing and contains an extra UBA domain relative to NUB1 (2). Research studies indicate that NUB1 and NUB1L non-covalently bind NEDD8 and facilitate delivery of both NEDD8 monomers and NEDD8 conjugates to the proteasome for degradation (2-5). In addition, NUB1L binds and enhances the proteasomal degradation of the FAT10 ubiquitin-like protein (6). Additional research shows that NUB1 negatively regulates cell proliferation, likely due to inhibition of NEDD8 conjugation to SCF ubiquitin ligases, which leads to inhibition of p27 and cyclin E ubiquitination (3,7). NUB1 has been identified as a putative therapeutic target in Huntington's disease as NUB1 promotes a decrease in levels of mutant HTT protein (8).

Background References

1. Kamitani, T. et al. (2001) *J Biol Chem* 276, 46655-60.
2. Tanaka, T. et al. (2003) *J Biol Chem* 278, 32905-13.
3. Kito, K. et al. (2001) *J Biol Chem* 276, 20603-9.
4. Tanji, K. et al. (2005) *Biochem Biophys Res Commun* 337, 116-20.
5. Liu, S. et al. (2013) *J Biol Chem* 288, 31339-49.
6. Hipp, M.S. et al. (2004) *J Biol Chem* 279, 16503-10.
7. Hosono, T. et al. (2010) *Br J Cancer* 102, 873-82.
8. Lu, B. et al. (2013) *Nat Neurosci* 16, 562-70.

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 **M:** Mouse **R:** Rat **Mk:** Monkey

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