Revision 4

NUT (C52B1) Rabbit mAb

#3625 Store at -20C

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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, IF-F	H R	Endogenous	150	Rabbit IgG	#Q86Y26	256646

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:50 - 1:200
Immunofluorescence (Frozen)	1:800 - 1:1600

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #64162.

Specificity/Sensitivity

NUT (C52B1) Rabbit mAb detects endogenous levels of total NUT protein. The antibody also detects endogenous levels of the BRD4-NUT fusion protein found in NUT midline carcinoma (NMC).

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Monoclonal antibody is produced by immunizing animals with a recombinant protein corresponding to the human NUT protein.

Background

Nuclear protein in testis (NUT) is normally confined to the germ cells of the testis and ovary (1,2). NUT midline carcinoma (NMC) is a recently recognized cancer that is defined by the presence of chromosomal rearrangements involving the *NUT* gene on chromosome 15q14 (3). In most cases the chromosomal translocation occurs between NUT and BRD4 on chromosome 19, resulting in the formation of a BRD4-NUT fusion protein. In the remaining tumors, variant NUT rearrangements are present involving BRD3, a very close homolog of BRD4. BRD4-NUT and BRD3-NUT encode fusion proteins that appear to contribute to carcinogenesis by blocking epithelial cell differentiation. NMCs, which are aggressive and highly lethal carcinomas, are morphologically indistinguishable from other poorly differentiated carcinomas. Given the limited expression of endogenous NUT protein, this antibody can be used to detect NUT fusion proteins in tissues by immunohistochemistry and immunofluorescence (2).

Background References

1. French, C.A. et al. (2003) *Cancer Res* 63, 304-7.
2. Haack, H. et al. (2009) *Am J Surg Pathol* 33, 984-91.
3. French, C.A. et al. (2008) *Oncogene* 27, 2237-42.

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 **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: Human **R:** Rat

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