

Ku (p70 / p80) Ab-3 (Clone 162)

Mouse Monoclonal Antibody

Cat. #MS-286-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Purified Ab with BSA and Azide)

Cat. #MS-286-P1ABX or -PABX (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)

Cat. #MS-286-R7 (7.0ml) (Ready-to-Use for Immunohistochemical Staining)

Cat. #MS-286-PCS (5 Slides) (Positive Control for Histology)

Please note this data sheet has been changed effective December 6, 2011

Description: The Ku autoantigen is a heterodimer of 70kDa (p70) and ~80kDa (p80) proteins. The p70/p80 dimer is important for function of a 460kDa DNA-dependent protein kinase that phosphorylates certain transcription factors, including Sp1, Oct-1, p53, and SV40 large T antigen *in vitro*. Ku protein plays a role in cell signaling, proliferation, DNA repair, replication, transcriptional activation, and apoptosis.

Mol. Wt. of Antigen: 70kDa and 80kDa

Epitope: A conformational epitope of p70/p80 dimer, which is destroyed during Western blotting

Species Reactivity: Human, Monkey, *Xenopus*. Mouse and Rat (Immunoprecipitation only). Does not react with cow and rabbit.

Clone Designation: 162

Ig Isotype: IgG_{2a}

Immunogen: Human B cell nuclei from plasmacytoid 2p68 cells

Applications and Suggested Dilutions:

- Affinity Purification (Order Ab without BSA)
- Flow Cytometry
- Gel Supershift (Order Ab at 1 mg/ml)
- Immunofluorescence
- Western Blotting (Not suitable)
- Immunohistology (Formalin/paraffin)
(Ab 1-2µg/ml for 30 min at RT)
- * [No special pretreatment is required for staining of formalin-fixed, paraffin-embedded tissues]

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: Tonsil.

Cellular Localization: Nuclear

Storage and Stability: Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody

WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

Supplied As: 200µg/ml antibody purified from the ascites fluid by ammonium sulfate precipitation and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml, or Prediluted antibody which is ready-to-use for staining of formalin-fixed, paraffin-embedded tissues.

Key References:

1. Wang J, *et. al.* Molecular Biology Reports, 1993, 18(1):15-28.
2. Reeves WH, *et. al.* Journal of Experimental Medicine, 1985, 161(1):18-39.

Limitations and Warranty:

Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. NeoMarkers is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in



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a large volume of running water to avoid deposits forming in metal drainage pipes.

For Research Use Only

Additional Key References:

1. Griffin W, Torrance H, Rodda DJ, Prefontaine GG, Pope L, Hache RJG. Sequence-specific DNA binding by autoantigen and its effects on transcription. *Nature*, 1996, 380:265-8.
2. Ajmani AK; Satoh M; Reap E; Cohen PL; Reeves WH. Absence of autoantigen Ku in mature human neutrophils and human promyelocytic leukemia line (HL-60) cells and lymphocytes undergoing apoptosis. *Journal of Experimental Medicine*, 1995 Jun 1, 181(6):2049-58.
3. Boubnov NV; Hall KT; Wills Z; Lee SE; He DM; Benjamin DM; Pulaski CR; Band H; Reeves W; Hendrickson EA; et al. Complementation of the ionizing radiation sensitivity, DNA end binding, and V(D)J recombination defects of double-strand break repair mutants by the p86 Ku autoantigen. *Proceedings of the National Academy of Sciences of the United States of America*, 1995 Jan 31, 92(3):890-4.
4. DiCroce PA; Krontiris TG. The BCL2 major breakpoint region is a sequence- and cell-cycle-specific binding site of the Ku antigen. *Proceedings of the National Academy of Sciences of the United States of America*, 1995 Oct 24, 92(22):10137-41.
5. Wang J; Chou CH; Blankson J; Satoh M; Knuth MW; Eisenberg RA; Pisetsky DS; Reeves WH. Murine monoclonal antibodies specific for conserved and non-conserved antigenic determinants of the human and murine Ku autoantigens. *Molecular Biology Reports*, 1993 Jun, 18(1):15-28.
6. Reeves WH. Use of monoclonal antibodies for the characterization of novel DNA-binding proteins recognized by human autoimmune sera. *Journal of Experimental Medicine*, 1985 Jan 1, 161(1):18-39.

