BACKGROUND

The Ku protein is localized in the nucleus and is composed of subunits referred to as Ku-70 (or p70) and Ku-86 (or p86) which is also known by the synonym Ku-80 or (p80). Ku was first described as an autoantigen to which antibodies were produced in a patient with scleroderma-poly-myositis overlap syndrome, and was later found in the sera of patients with other rheumatic diseases. Both subunits of the Ku protein have been cloned, and a number of functions have been proposed for Ku, including cell signaling, DNA replication and transcriptional activation. Ku is involved in Pol II-directed transcription by virtue of its DNA binding activity, serving as the regulatory component of the DNA-associated protein kinase that phosphorylates Pol II and transcription factor Sp. Ku proteins also activate transcription from the U1 small nuclear RNA and the human transferrin receptor gene promoters. A Ku-related protein designated the enhancer 1 binding factor (E1BF), composed of two subunits, has been identified as a positive regulator of RNA polymerase I transcription initiation.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: XRCC6 (human) mapping to 22q13.2, XRCC5 (human) mapping to 2q35, Xrcc6 (mouse) mapping to 15 E1, Xrcc5 (mouse) mapping to 1 C3.

SOURCE

Ku-70/Ku-86 (SPM274) is a mouse monoclonal antibody raised against human B cell nuclei from plasmacytoid 2p68 cells.

PRODUCT

Each vial contains 50 µg IgG2a in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.