anti-hnRNP-U / SAF-A antibody, rabbit serum

70-415 100 ul

Heterogeneous nuclear ribonucleoprotein U (**hnRNP-U**, also known as **scaffold attachment factor A**, **SAF-A**) is a nuclear matrix-associated protein that interacts with chromosomal DNA. **hnRNP-U** specifically binds to scaffold/matrix attachment region of DNA and could thus be involved in higher order chromatin structure. **hnRNP-U** is also a RNA binding protein and forms complexes with heterogeneous nuclear RNA (hnRNA) and plays an important role in pre-mRNA processing and transport.

HnRNP-U is reported to interact with necdin, a growth suppressor that is expressed in terminally differentiated neurons and skeletal muscle cells. It has been shown that **hnRNP-U** recruits necdin to the nuclear matrix where they form a stable complex. It is suggested that necdin suppresses cell proliferation through its interaction with **hnRNP-U** in the specific subnuclear structure (ref.2).

Applications:

1. Western blotting (dilution: 1/3,000-1/1,000)
2. Immunocytochemistry (dilution: 1/1,000-1/500)
3. Immunoprecipitation

Immunogen: Recombinant MBT-fused mouse hnRNP-U (aa 614-800).

Host: Rabbit

Specificity: Reacts with mouse and rat, and predicted to react with human from the amino acid sequence homology.

Form: Antiserum added with 0.05% sodium azide.

Storage: Shipped at 4℃ or -20℃ and stored at -20℃

Data Link: Swiss-Prot Q8VEK3 (mouse), Q00839 (human)

References: **This antibody was produced and used in ref.2.**

1. Kiledjian M and Dreyfuss G (1992) "Primary structure and binding activity of the hnRNP U protein: binding RNA through RGG box." *EMBO J* **11**: 2655-2664 PMID: 1628625
2. Taniura H and Yoshikawa K (2002) "Necdin interacts with the ribonucleoprotein hnRNP U in the nuclear matrix." *J Cell Biochem* **84**:545-555 PMID: 11813259

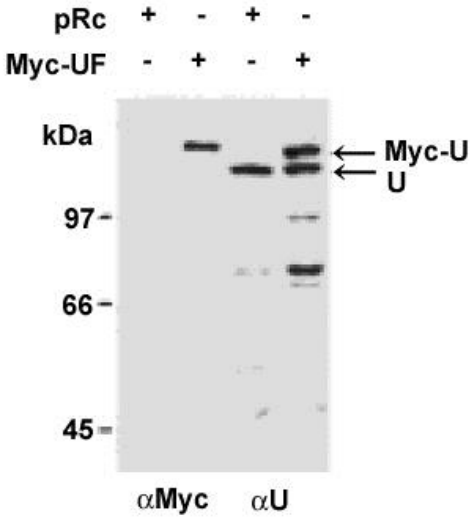
Related product: #74-104 anti-APP (C-terminal) antibody, rabbit serum

to be continued

Fig.1 Immunoblotting of hnRNP-U with this antibody (ref.2).

Specificity of anti-hnRNP-U antibody, HUT.
Cell lysates were prepared from SAOS-2 cells transfected with pRc/CMV vectors (pRc) or pRc/CMV vectors expressing Myc-tagged hnRNP-U (Myc-UF). Exogenous Myc-tagged hnRNP-U (Myc-U) and endogenous hnRNP-U (U) proteins were detected by immunoblotting with anti-Myc antibody (αMyc) or HUT (αU).

This antibody recognized exogenous Myc-tagged hnRNP-U and endogenous ~120 kDa hnRNP-U proteins in SAOS-2 cells.



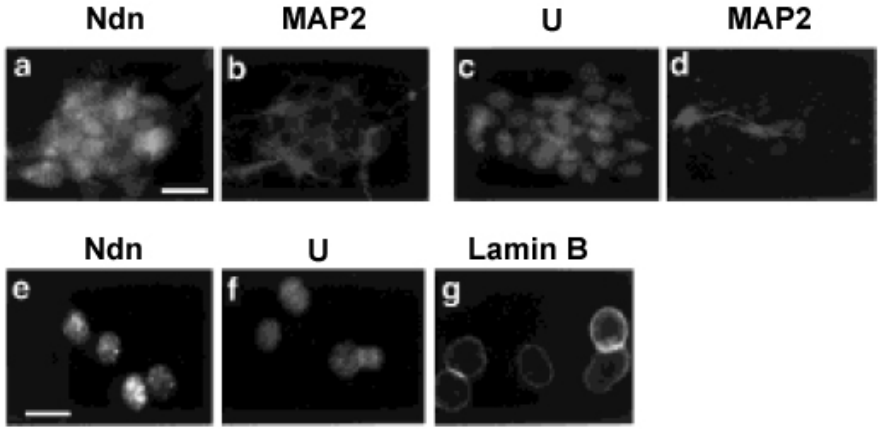


Fig.2 Immunocytochemistry using this antibody, HUT (ref.2)

Mouse P19 neurons were labeled with anti-necdin antibody (Ndn) (**a**) or with HUT for hnRNP-U (U) (**c**) in combination with anti-neuronal marker, MAP2, antibody for MAP2 (**b**, **d**). The nuclear matrix was prepared in situ and labeled for necdin (Ndn) (**e**), hnRNP-U (U) (**f**), and a nuclear matrix marker, lamin B (**g**).

Both necdin and hnRNP-U were localized to the nuclei of differentiated neurons, which express the neuronal marker MAP2 (**a**-**d**). Necdin was also distributed in the neuronal cytoplasm (**a**). The immunocytochemical analysis of in situ extracted nuclear matrix revealed that both necdin and hnRNP-U were concentrated in intranuclear speckles throughout the nucleoplasm (**e**, **f**). Lamin B, a nuclear matrix marker, was localized to the nuclear lamina (**g**). These results suggest that both necdin and hnRNP-U are associated with the nuclear matrix of neurons.