

## Product Information

**Anti-U1 snRNP C (U1C) antibody, Rat monoclonal**  
clone 4H12, purified from hybridoma cell culture

Catalog Number **SAB4200188**  
–20 °C

### Product Description

Monoclonal Anti-U1 snRNP C (U1C) (rat IgG2a isotype) is derived from the hybridoma 4H12 produced by the fusion of mouse myeloma cells (SP2) and splenocytes from a rat immunized with mouse U1C protein (GenelD; 20630) fusion protein. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-U1 snRNP C (U1C) recognizes human, monkey, mouse, rat, and hamster U1C. The product may be used in several immunochemical techniques including immunoblotting (~20 kDa), immunoprecipitation and immunocytochemistry.

The U1 small nuclear ribonucleoprotein particle (snRNP) has an important function in the early formation of the spliceosome, the multicomponent complex in which pre-mRNA splicing takes place. The U1 snRNP complex contains the U1 snRNA molecule and the U1 snRNP specific proteins U1-70K, U1A, and U1C, plus a common set of eight proteins, called Sm proteins.<sup>1</sup> U1A and U1-70K contain RNA binding domains and interact with naked snRNA on their own.<sup>2,3</sup> However, the binding of U1C to the U1snRNP particle is dependent on protein-protein interactions between U1C and U1-70K as well as U1C and the common Sm proteins.<sup>4</sup> In addition, U1C was found to passively enter the nucleus.

In cultured HeLa cells, mutant U1C proteins that are not able to bind to the U1 snRNP do not accumulate in the nucleus, indicating that nuclear accumulation of U1C is due to incorporation of the protein into the U1 snRNP.<sup>5</sup> Interestingly, U1C, apart of being a well-characterized splicing protein, was also found to function in transcriptional regulation.<sup>6</sup>

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.0 mg/mL

### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

Store at –20 °C. For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze at –20 °C in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

### Product Profile

**Immunoblotting:** a working antibody concentration of 1-2 µg/mL is recommended using HeLa, COS7, or CHO cell extracts.

**Note:** In order to obtain the best results using various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

### References

1. Pettersson, I. et al., *J. Biol. Chem.*, **259**, 5907–5914 (1984)
2. Query, C.C. et al., *Mol. Cell. Biol.*, **9**, 4872–4881 (1989).
3. Scherly, D. et al., *EMBO J.*, **8**, 4163–4170 (1989).
4. Nelissen, R.L. et al., *EMBO J.*, **13**, 4113–4125 (1994).
5. Klein Gunnewiek, J.M. et al., *Exp. Cell. Res.*, **235**, 265-273 (1997).
6. Knoop, L.L., and Baker, S.J., *J. Biol. Chem.*, **275**, 24865–24871 (2000).

GG,CS,KAA,PHC,MAM 01/18-1