

Product Information

Monoclonal Anti-Gemin 8

Clone 1F8

produced in mouse, purified immunoglobulin

Catalog Number **G5796**

Product Description

Monoclonal Anti-Gemin 8 (mouse IgG2a isotype) is derived from the hybridoma 1F8-B3 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with Gemin8 recombinant protein (GenelD: 54960). The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Gemin 8 recognizes human, mouse, rat, and dog Gemin8. The antibody may be used in various immunochemical techniques including ELISA, immunoblotting (~ 28 kDa), immunoprecipitation, and immunocytochemistry.¹

Spinal muscular atrophy (SMA) is caused by reduced expression or mutations in the Survival of Motor Neurons (SMN) protein. Two copies of the SMN gene (SMN1 and SMN2) exist in humans on chromosome 5. Deletion or mutations in the telomeric copy (SMN1) cause the SMA phenotype. The severity of SMA is in direct correlation with the expression level of the SMN protein either from the SMN1 gene or a different spliced form of SMN from the SMN2 gene.^{2,3}

The SMN protein forms a multi-protein complex with the Gemin 2-7 proteins. The SMN complex interacts with various protein substrates such as Sm and Lsm proteins of the spliceosomal snRNPs, fibrillarin, GAR1, RNA helicase A, human hnRNP proteins (hnRNPQ, U and R), coilin and p53. The SMN complex is important in various biological processes such as assembly and restructuring of spliceosomal snRNPs, pre mRNA splicing and transcription.^{1,4,5} A new integral component of the SMN complexes has been identified, Gemin8. It is essential for the proper structural organization of the SMN complex. Furthermore, the heteromeric subunit containing Gemin6, Gemin7, Gemin8, and Unrip was found to be involved in the recruitment of Sm protein to the snRNP pathway.^{1,6}

Reagent

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 15 mM sodium azide as a preservative.

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 Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

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 concentration of 1-2 µg/mL is recommended using HeLa nuclear cell extract.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Carissimi, C., et al., *J. Biol. Chem.*, **281**, 8126-8134 (2006).
2. Paushkin, S., et al., *Curr. Opin. Cell. Biol.*, **14**, 305-312 (2002).
3. Pellizzoni, L., et al., *Proc. Natl. Acad. Sci. USA*, **96**, 11167-11172 (1999).
4. Baccon, J., et al., *J. Biol. Chem.*, **277**, 31957-31962 (2002).
5. Pellizzoni, L., et al., *Science*, **298**, 1775-1779 (2002).
6. Carissimi, C., et al., *J. Biol. Chem.*, **281**, 37009-37016 (2006).

GG,KAA,PHC 05/08-1