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Product Information

Anti-ZPR1 antibody, Mouse monoclonal
clone LG1, purified from hybridoma cell culture

Product Number **Z4876**

Product Description

Anti-ZPR1 antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the LG1 hybridoma produced by the fusion of mouse myeloma cells (SP2/0) and splenocytes from BALB/c mice immunized with full length human ZPR1. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2.

Monoclonal Anti-ZPR1 recognizes human, mouse, and yeast ZPR1. The antibody can be used in ELISA,[1] immunoblotting (approx. 51 kDa),[1, 6] immunocyto-chemistry,[1] and immunohistochemistry.[1]

ZPR1 (Zinc finger protein 1) is a zinc binding protein (1.9 mole zinc per 1 mole protein) that contains a zinc finger region both at the N- and C- terminal parts of the protein. The protein is expressed in several tissues including brain, spleen, liver, muscle, kidney, and testis.[2]

ZPR1 interacts with many different proteins. Activation of the epidermal growth factor receptor (EGFR) by its ligand EGF causes the dissociation of ZPR1 from the intracellular part of the receptor and its accumulation in the nucleus.[2-4] ZPR1 and EF-1α (Elongation Factor 1α) are found as a complex in the cytoplasm and therefore relocalize together to the nucleus. It has been suggested that ZPR1 acts as a mitogenic signaling molecule from the cytoplasm to the nucleus.[3, 5] ZPR1 interacts with the survival of motor neurons (SMN) protein and co-localizes in nuclear bodies, including Cajal bodies and gems.[1] In patients with Werdnig-Hoffman syndrome (spinal muscular atrophy, SMA type I) that have mutations in the SMN protein, ZPR1 does not interact with SMN and both ZPR1 and SMN do not localize to nuclear bodies.[1] SMA patients with reduced levels of SMN also have decreased amounts of ZPR1.[7]

Monoclonal antibodies specific for ZPR1 are an important tool for studying this protein in various biological processes.

Reagent

Monoclonal Anti-ZPR1 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: Approx. 2 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

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

Product Profile

Immunoblotting: a working antibody concentration of 20-30 μg/ml is recommended using total cell extracts of the A431 human epidermoid carcinoma cell line.

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

References

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