

Product Information

MONOCLONAL ANTI-p115/TAP

Clone 5D6

Purified Mouse Immunoglobulin

Product Number **P 3118**

Product Description

Monoclonal Anti-p115/TAP (mouse IgG1 isotype) is derived from the 5D6 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from mice immunized with purified rat p115/TAP.¹ The isotype is determined using Sigma ImmunoType[™] Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-p115/TAP recognizes rat p115/TAP (approx. 95-100 kDa). Applications include the detection of p115/TAP by ELISA, immunoblotting, immunoprecipitation, and immunocytochemistry.^{1,2}

Transport of vesicles between compartments in the cell needs a selective docking process before membrane fusion. This is a sequential event mediated by a number of different proteins. The first of these events is the formation of a tether made of fibers, up to 100 nm in length that connect 100 nm diameter coat protein I (COPI) coated vesicles to the Golgi.³ The formation of a tether between a COPI coated vesicle and the Golgi is mediated by three different proteins. The first is GM130, a coiled-coil segmented dimer protein associated with the cytoplasmic peripheral component of the Golgi. The second is giantin; a C-terminally anchored dimeric integral component of the Golgi membrane. The third is p115, which mediates vesicle tethering by simultaneously binding giantin in vesicles and GM130 on the Golgi. Therefore, p115 is a peripheral Golgi membrane protein associated primarily with cis-Golgi elements including the intermediate compartment.

Due to its role in the formation of the tether, p115 has an important role in endoplasmic reticulum to Golgi traffic and in intra-Golgi traffic.³ p115, also known as TAP1 (transcytosis associated protein)⁴ is homologous to Uso1p, a protein required for endoplasmic reticulum to Golgi transport in *Saccharomyces cerevisiae*. Both proteins have an N-terminal globular domain, a coiled-coil dimerization domain, and a C-terminal acidic domain. This is similar in structure to a myosin II like

parallel homodimer with two globular heads and an extended kinked tail.

Antibodies reacting specifically with p115/TAP1 are an essential tool for studying vesicle trafficking in the cell.

Reagent

Monoclonal Anti-p115/TAP is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, and 15 mM sodium azide.

Antibody concentration: Approx. 2-2.5 mg/ml

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also 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

For immunoblotting, a minimum working antibody concentration of 2-4 µg/ml is recommended using cytosolic and membrane extracts of rat liver.

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

References

1. Barroso, M., et al., Proc. Natl. Acad. Sci. USA, **92**, 527-531 (1995).
2. Nelson, D.S., et al., J. Cell Biol., **143**, 319-331 (1998).

3. Linstedt, A.D., et al., J. Biol. Chem., **275**, 10196-10201 (2000).
4. Sapperstein, S.K., et al., Proc. Natl. Acad. Sci. USA, **92**, 522-526 (1995).

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