

## Product Information

### Anti-GM130 (C-terminal)

produced in rabbit, affinity isolated antibody

Catalog Number **G7295**

#### Product Description

Anti-GM130 (C-terminal) is developed in rabbit using a synthetic peptide, corresponding to amino acid residues 968-983 of human GM130 (Golgi matrix protein of 130 kDa) with an N-terminal added lysine, conjugated to KLH, as immunogen. The corresponding sequence is identical in rat and mouse. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-GM130 recognizes human, rat and mouse GM130. Applications include immunoblotting, ~130 kDa, immunofluorescence, and immunoprecipitation. Detection of the GM130 band by immunoblotting is specifically inhibited with the immunizing peptide. The antibody may detect additional bands in some cell and tissue extracts.

The Golgi complex consists of a stack of flattened cisternae and a tubular network on both the entry site (the cis-Golgi network; CGN) and the exit site (the trans-Golgi network; TGN). The Golgi complex is localized in the perinuclear region of most eukaryotic cells and is involved in processing, transporting and sorting of intracellular proteins.<sup>1</sup> GM130 is a peripheral cytoplasmic protein that is tightly bound to Golgi membranes and localizes mostly to the cis-Golgi network (CGN).<sup>2</sup> GM130 is a member of the golgin family of Golgi autoantigens. The C-terminal part of the protein is highly homologous to golgin-95, a human Golgi autoantigen.<sup>1</sup> GM130 is involved in maintaining the structural integrity of the Golgi apparatus, stacking of Golgi cisternae and vesicular transport.<sup>1, 3, 4</sup>

It has been reported that GM130 together with two other Golgi matrix proteins, p115 and GRASP65, were found to be located also at transitional ER sites, where they probably function as a template in nucleating the formation of the Golgi apparatus.<sup>3, 5</sup>

Several alternatively spliced transcript variants of the GM130 gene have been described. GM130 is an extended rod-like protein with coiled-coil domains that forms part of a larger oligomeric complex, and interacts with the vesicle docking protein p115 – this interaction is inhibited by phosphorylation of GM130 during mitosis.<sup>4</sup> GM130 also interacts with GRASP65, a protein involved in postmitotic reassembly and

stacking of the Golgi cisternae.<sup>3, 6</sup> GM130 in complex with GRASP65 and other proteins interacts with activated Rab1, a protein known to regulate the transport of newly synthesized proteins from the ER to the Golgi apparatus.<sup>7</sup> This antibody can be used as a cis-Golgi network marker.

#### 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

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 hazardous 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, or 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 concentration of 0.1-0.2 µg/mL is recommended using a whole extract of rat NRK cells and a chemiluminescent detection reagent.

Indirect immunofluorescence: a working concentration of 0.2-0.4 µg/mL is recommended using rat NRK cells.

Immunoprecipitation: 2-4 µg of the antibody immunoprecipitates GM130 from human HeLa epithelioid carcinoma and mouse NIH3T3 cell lysates.

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

## References

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4. Lowe, M., et al., *J. Cell Biol.*, **149**, 341-356 (2000).
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6. Barr, F.A., et al., *EMBO J.*, **17**, 3258-3268 (1998).
7. Moyer, B.D., et al., *Traffic*, **2**, 268-276 (2001).

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