

# Anti-GP2 (Glycoprotein 2) / ZAP75 Antibody

Mouse Monoclonal Antibody

Catalog # AH13273

## Product Information

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<b>Application</b>	IF, FC, E
<b>Primary Accession</b>	<a href="#">P55259</a>
<b>Other Accession</b>	<a href="#">53985</a>
<b>Reactivity</b>	Human
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Isotype</b>	Mouse / IgG2b, lambda
<b>Clone Names</b>	GP2/1551
<b>Calculated MW</b>	59480

## Additional Information

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<b>Gene ID</b>	2813
<b>Other Names</b>	Glycoprotein 2 (zymogen granule membrane); GP2; Pancreatic zymogen granule membrane associated protein GP2; Pancreatic zymogen granule membrane protein GP-2; ZAP75
<b>Application Note</b>	ELISA (For coating, order Ab without BSA); ,Flow Cytometry (0.5-1ug/million cells); ,Immunofluorescence (0.5-1ug/ml); ,Optimal dilution for a specific application should be determined.
<b>Format</b>	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
<b>Storage</b>	Store at 2 to 8°C.Antibody is stable for 24 months.
<b>Precautions</b>	Anti-GP2 (Glycoprotein 2) / ZAP75 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	GP2 ( <a href="#">HGNC:4441</a> )
<b>Function</b>	Functions as an intestinal M-cell transcytotic receptor specific for type-I-piliated bacteria that participates in the mucosal immune response toward these bacteria. At the apical membrane of M- cells it binds fimH, a protein of the bacteria type I pilus tip. Internalizes bound bacteria, like E.coli and S.typhimurium, from the lumen of the intestine and delivers them, through M-cells, to the underlying organized lymphoid follicles where they are

captured by antigen-presenting dendritic cells to elicit a mucosal immune response.

**Cellular Location**

Zymogen granule membrane {ECO:0000250|UniProtKB:P19218}; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:P19218}. Secreted Cell membrane {ECO:0000250|UniProtKB:P19218}; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:P19218}. Apical cell membrane {ECO:0000250|UniProtKB:Q9D733}; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:P19218}. Membrane raft {ECO:0000250|UniProtKB:P19218}; Lipid-anchor, GPI-anchor {ECO:0000250|UniProtKB:P19218}. Endosome {ECO:0000250|UniProtKB:Q9D733}. Note=Secreted, after cleavage, in the pancreatic juice.

**Tissue Location**

Expressed in pancreas (at protein level) (PubMed:10760606, PubMed:8666297). Specifically expressed by M (microfold) cells which are atypical epithelial cells of the intestine (at protein level) (PubMed:19907495).

## Background

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GP2 (glycoprotein 2), also known as ZAP75, is a 537 amino acid secreted protein. It is an integral membrane protein that is secreted from intracellular zymogen granules and associates with the plasma membrane via glycosylphosphatidylinositol (GPI) linkage. GP2 is cleaved and then released into the pancreatic duct along with exocrine secretions. GP2 binds pathogens such as enterobacteria, thereby playing an important role in the innate immune response. The C-terminus of this protein is related to the C-terminus of the protein encoded by the neighboring gene, uromodulin (UMOD). GP2 is also expressed on the apical plasma membrane of specialized microfold (M) cells among enterocytes and serves as a transcytotic receptor for mucosal antigens. M cells are considered a promising target for oral vaccination against various infectious diseases.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.