COSMO BIO CO., LTD.
Inspiration for Life Science

Trans Genic Inc.

Code No.KAL-KG116

For research use only

G protein coupled receptor, Diabetes, Obesity

Anti Mouse GPR40 Monoclonal Antibody (Clone No. G16)

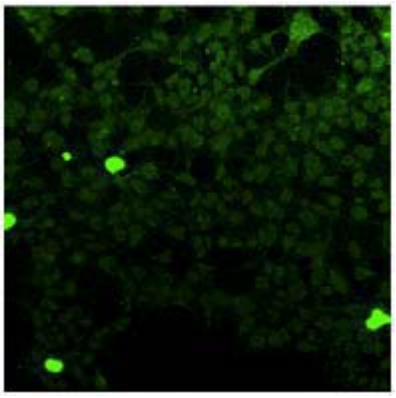
G protein coupled receptors (GPCRs) are a protein family of transmembrane receptors, and involved in a wide variety of physiological processes. GPR40 is also a member of GPCRs and functions as a receptor for long-chain free fatty acids (FFA), which is expressed in beta cells in the islets of pancreas and is involved in the regulation of glucose and lipid metabolisms. Long chain FFAs amplify glucose-stimulated insulin secretion from pancreatic beta cells by activating GPR40.

GPR40 knockout mice fed a high-fat diet are protected against obesity-induced hyperinsulinemia and hepatic steatosis. Transgenic mice overexpressed GPR40 in pancreatic beta cells had impaired beta cell function and developed diabetes.GPR40 is an important mediator of both the acute, stimulatory effects and chronic, deleterious effects of FFAs on beta cells.

Moreover, GPR40 may be implicated in the control of breast cancer cell growth by fatty acids and provide a link between fat and cancer.

This antibody is specific to GPR40 and will be useful to research for lipid metabolism, obesity and diabetes.

Package Size	25μg（100μL/vial）
Format	Mouse Monoclonal antibody 0.25mg/mL
Buffer	PBS [containing 2% Block Ace as a stabilizer, 0.1%Proclin as a bacteriostat]
Storage	Store below －20℃ Once thawed, store at 4℃. Repeated freeze-thaw cycles should be avoided.
Purification method	The splenic lymphocytes from GANP mouse, immunized with the first extracellular domain peptides of mouse GPR40 conjugated with KLH, were fused to myeloma P3U1 cells. The screening of the hybridoma cells was performed on ELISA. The cell line with positive reaction was grown on non-serum medium, from which the antibody was purified by Protein G affinity chromatography.
Crossreactivity	human
Working dilution	For Immunocytochemistry ： 1.0 μg/mL For Fluorescence activated cell sorting： 0.5 μg/mL



Immunocytochemical staining of HEK293 cells overexpressing human GPR40
Tsujimoto G., Genomic Drug Discovery Science, Kyoto University Graduate school of Pharmaceutical Sciences, Kyoto, Japan

This product is generated from GANP® mice.

Code No.KAL-KG116

For research use only

G protein coupled receptor, Diabetes, Obesity

Anti Mouse GPR40 Monoclonal Antibody (Clone No. G16)

【Reference】

1. Briscoe CP. et al:
The orphan G protein-coupled receptor GPR40 is activated by medium and long chain fatty acids.
J Biol Chem. 2003 Mar 28;278(13):11303-11.

2. Itoh Y. et al:
Free fatty acids regulate insulin secretion from pancreatic beta cells through GPR40.
Nature. 2003 Mar 13;422(6928):173-6. Epub 2003 Feb 23.

3. Steneberg P. et al:
The FFA receptor GPR40 links hyperinsulinemia, hepatic steatosis, and impaired glucose homeostasis in mouse.
Cell Metab. 2005 Apr;1(4):245-58.

4. Hardy S. et al:
Oleate promotes the proliferation of breast cancer cells via the G protein-coupled receptor GPR40.
J Biol Chem. 2005 Apr 8;280(14):13285-91.

5.Hirasawa A. et al:

Production and characterization of a monoclonal antibody against GPR40 (FFAR1; free fatty acid receptor 1)

BBRC 365 (2008) 22–28*

*Application Reference

Distributor

COSMO BIO CO., LTD.
Inspiration for Life Science

TOYO 2CHOME, KOTO-KU, TOKYO, 135-0016, JAPAN
http://www.cosmobio.co.jp e-mail : export@cosmobio.co.jp
Phone : +81-3-5632-9617 FAX : +81-3-5632-9618