

# PRODUCT INFORMATION



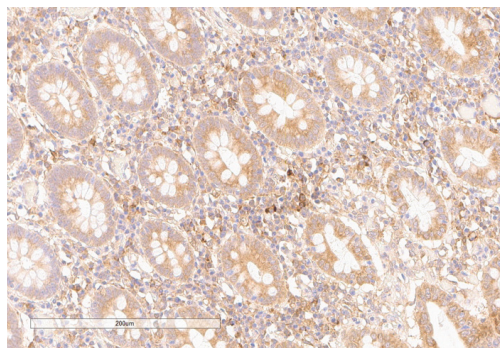
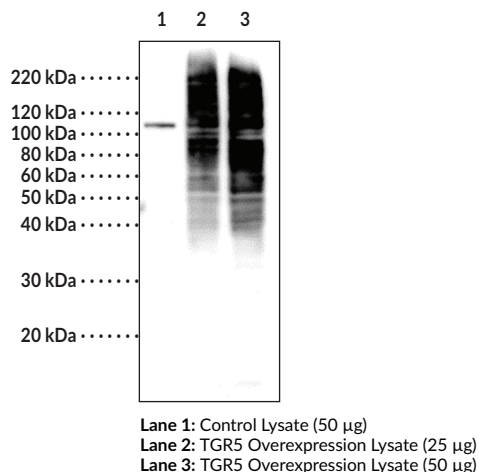
## TGR5 (C-Term) Polyclonal Antibody

Item No. 27343

### Overview and Properties

**Contents:** This vial contains 500 µl of peptide affinity-purified antibody.  
**Synonyms:** hBG37, GPBAR1, hGPCR19, GPR131, G Protein-Coupled Bile Acid Receptor 1, M-BAR, Membrane-Type Receptor for Bile Acids  
**Immunogen:** Synthetic peptide from the C-terminal region of human TGR5  
**Species Reactivity:** (+) Human; other species not tested  
**Uniprot No.:** Q8TDU6  
**Form:** Liquid  
**Storage:** -20°C (as supplied)  
**Stability:** ≥3 years  
**Storage Buffer:** PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide  
**Host:** Rabbit  
**Applications:** Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC and WB is 1:200. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human colon tissue after heat-induced antigen retrieval in pH 6.0 citrate buffer. After incubation with TGR5 (C-Term) Polyclonal Antibody (Item No. 27343) at a 1:200 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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TGR5, also known as GPCR1, is a G protein-coupled receptor (GPCR) belonging to the bile acid receptor subclass.<sup>1</sup> It is a plasma membrane-bound transmembrane protein and is primarily expressed in spleen and placenta. TGR5 is activated by the endogenous bile acids cholic acid (Item No. 20250), lithocholic acid (Item No. 20253), tauroolithocholic acid (Item No. 17275), deoxycholic acid (Item Nos. 20756 | 18231), and chenodeoxycholic acid (Item No. 10011286), among others. Activation of TGR5 by the synthetic agonist INT-777 (Item No. 17678) decreases plasma triglyceride levels and urinary levels of albumin, thiobarbituric acid reactive substances (TBARS), and hydrogen peroxide, as well as prevents diabetic nephropathy, in a *db/db* mouse model of diabetes.<sup>2</sup> Activation of TGR5 by INT-777 also prevents hepatic steatosis and increases in fat, liver, and brown adipose tissue mass in a mouse model of diet-induced obesity.<sup>3</sup> Transgenic overexpression of TGR5 increases glucose tolerance, as well as plasma levels of insulin and glucagon-like peptide 1 (GLP-1), during an oral glucose tolerance test in mice fed a high-fat diet. Increased expression of TGR5 has been found in tissue samples from patients with intestinal-type adenocarcinoma or intestinal metaplasia, but not healthy mucosa.<sup>4</sup> TGR5 protein levels are also increased in patient-derived Barrett's esophageal and esophageal adenocarcinoma tissues.<sup>5</sup> Cayman's TGR5 (C-Term) Polyclonal Antibody can be used for Western blot and immunohistochemistry (IHC) applications. The antibody recognizes the C-terminal region of TGR5 from human samples.

## References

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2. Wang, X.X., Edelstein, M.H., Gafter, U., et al. G protein-coupled bile acid receptor TGR5 activation inhibits kidney disease in obesity and diabetes. *J. Am. Soc. Nephrol.* **27**(5), 1362-1378 (2016).
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