

# GPR30 (K-19)-R: sc-48524-R

## BACKGROUND

G protein-coupled receptors (GPCRs), also designated seven transmembrane (7TM) receptors and heptahelical receptors, are a protein family which interact with G proteins (heterotrimeric GTPases) to synthesize intracellular second messengers such as diacylglycerol, cyclic AMP, inositol phosphates and calcium ions. Their diverse biological functions range from vision and olfaction to neuronal and endocrine signaling and are involved in many pathological conditions. G protein-receptor 30 (GPR30), also designated chemokine receptor-like 2 (CMKRL2), is a 375 amino acid protein orphan GPCR. GPR30 is an intracellular transmembrane estrogen receptor localized to the endoplasmic reticulum which binds estrogen and estrogen derivatives.

## REFERENCES

1. Filardo, E.J., et al. 2002. Estrogen action via the G protein-coupled receptor, GPR30: stimulation of adenylyl cyclase and cAMP-mediated attenuation of the epidermal growth factor receptor-to-MAPK signaling axis. *Mol. Endocrinol.* 16: 70-84.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 601805. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Visser, J.E., et al. 2004. The motor disorder of classic Lesch-Nyhan disease. *Nucleosides Nucleotides Nucleic Acids* 23: 1161-1164.
4. Hasbi, A., et al. 2005. A G protein-coupled receptor for estrogen: the end of the search? *Mol. Interv.* 5: 158-161.
5. Kakinuma, N., et al. 2005. Cloning of novel LERGU mRNAs in GPR30 3' untranslated region and detection of 2 bp-deletion polymorphism in gastric cancer. *Cancer Sci.* 96: 191-196.
6. Thomas, P., et al. 2005. Identity of an estrogen membrane receptor coupled to a G protein in human breast cancer cells. *Endocrinology* 146: 624-632.

## CHROMOSOMAL LOCATION

Genetic locus: GPER (human) mapping to 7p22.3; Gper (mouse) mapping to 5 G2.

## SOURCE

GPR30 (K-19)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GPR30 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-48524 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

GPR30 (K-19)-R is recommended for detection of GPR30 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

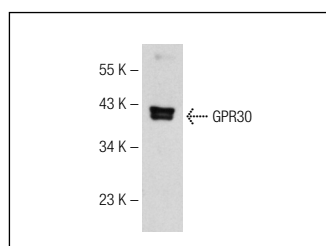
GPR30 (K-19)-R is also recommended for detection of GPR30 in additional species, including canine and porcine.

Suitable for use as control antibody for GPR30 siRNA (h): sc-60743, GPR30 siRNA (m): sc-60744, GPR30 shRNA Plasmid (h): sc-60743-SH, GPR30 shRNA Plasmid (m): sc-60744-SH, GPR30 shRNA (h) Lentiviral Particles: sc-60743-V and GPR30 shRNA (m) Lentiviral Particles: sc-60744-V.

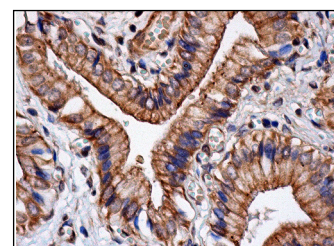
Molecular Weight of GPR30: 38 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or SK-BR-3 cell lysate: sc-2218.

## DATA



GPR30 (K-19)-R: sc-48524-R. Western blot analysis of GPR30 expression in SK-BR-3 whole cell lysate.



GPR30 (K-19): sc-48524. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing membrane and cytoplasmic staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Mau, M., et al. 2011. Expression of GPR30 and GPR43 in oral tissues: deriving new hypotheses on the role of diet in animal physiology and the development of oral cancers. *J. Anim. Physiol. Anim. Nutr.* 95: 280-285.
2. Sanchez, A.M., et al. 2011. Estrogen receptor- $\alpha$  promotes endothelial cell motility through focal adhesion kinase. *Mol. Hum. Reprod.* 17: 219-226.
3. Batenburg, W.W., et al. 2012. Angiotensin II-aldosterone interaction in human coronary microarteries involves GPR30, EGFR, and endothelial NO synthase. *Cardiovasc. Res.* 94: 136-143.
4. Pupo, M., et al. 2013. The nuclear localization signal is required for nuclear GPER translocation and function in breast Cancer-Associated Fibroblasts (CAFs). *Mol. Cell. Endocrinol.* 376: 23-32.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.