SANTA CRUZ BIOTECHNOLOGY, INC.

CCK-AR (N-20): sc-16172

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Gastrin is responsible for the stimulation of various digestive functions. In response to Gastrin, the stomach mucosa produces and secretes hydrochloric acid, and the pancreas secretes digestive enzymes. Gastrin also stimulates smooth muscle contraction and increases blood circulation and water secretion in the stomach and intestine. Cholecystokinin (CCK) is a neurotransmitter in the brain that is involved in satiety, stress and anxiety. CCK is expressed in the gastrointestinal (GI) system as well as the central nervous system (CNS), which provides further evidence that CCK modulates food consumption. Both CCK and Gastrin mediate their effects through two G protein-coupled receptors, CCK-AR and CCK-BR. CCK preferentially binds CCK-AR with high affinity, whereas CCK-BR binds to Gastrin and CCK with nearly equal affinities. The cholecystokinin receptors and their ligands are potential therapeutic targets for GI or CNS diseases.

REFERENCES

1. Koh, T.J. and Wang, T.C. 1995. Molecular cloning and sequencing of the murine Gastrin gene. Biochem. Biophys. Res. Commun. 216: 34-41.
2. Yassin, R.R. 1999. Signaling pathways mediating Gastrin's growth-promoting effects. Peptides 20: 885-898.
3. de Tullio, P., et al. 2000. Therapeutic and chemical developments of cholecystokinin receptor ligands. Expert Opin. Investig. Drugs 9: 129-146.
4. Crespi, F., et al. 2000. Involvement of cholecystokinin within craving for cocaine: role of cholecystokinin receptor ligands. Expert Opin. Investig. Drugs 9: 2249-2258.
5. Todisco, A., et al. 2001. Molecular mechanisms for the antiapoptotic action of Gastrin. Am. J. Physiol., Gastrointest. Liver Physiol. 280: 298-307.

CHROMOSOMAL LOCATION

Genetic locus: CCKAR (human) mapping to 4p15.2; Cckar (mouse) mapping to 5 C1.

SOURCE

CCK-AR (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CCK-AR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-16172 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.

RESEARCH USE

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

APPLICATIONS

CCK-AR (N-20) is recommended for detection of CCK-AR 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).

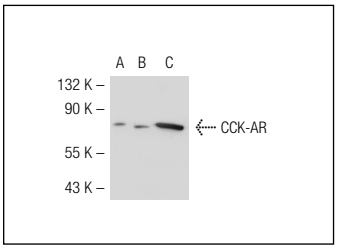
CCK-AR (N-20) is also recommended for detection of CCK-AR in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for CCK-AR siRNA (h): sc-43670, CCK-AR siRNA (m): sc-108028, CCK-AR shRNA Plasmid (h): sc-43670-SH, CCK-AR shRNA Plasmid (m): sc-108028-SH, CCK-AR shRNA (h) Lentiviral Particles: sc-43670-V and CCK-AR shRNA (m) Lentiviral Particles: sc-108028-V.

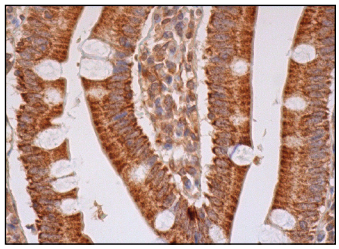
Molecular Weight of CCK-AR: 85-100 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, CCK-AR (m): 293T Lysate: sc-119083 or NIH/3T3 whole cell lysate: sc-2210.

DATA



CCK-AR (N-20): sc-16172. Western blot analysis of CCK-AR expression in non-transfected 293T: sc-117752 (**A**), mouse CCK-AR transfected 293T: sc-119083 (**B**) and NIH/3T3 (**C**) whole cell lysates.



CCK-AR (N-20): sc-16172. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Kim, H.J., et al. 2007. Estrogen receptor α-induced cholecystokinin type A receptor expression in the female mouse pituitary. J. Endocrinol. 195: 393-405.
2. Li, Y., et al. 2011. Low-affinity CCK-A receptors are coexpressed with leptin receptors in rat nodose ganglia: implications for leptin as a regulator of short-term satiety. Am. J. Physiol. Gastrointest. Liver Physiol. 300: G217-G227.