

CCK-AR (F-6): sc-514303



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. Beglinger, C., et al. 2001. Loxiglumide, a CCK-A receptor antagonist, stimulates calorie intake and hunger feelings in humans. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 280: 1149-1154.

CHROMOSOMAL LOCATION

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

SOURCE

CCK-AR (F-6) is a mouse monoclonal antibody raised against amino acids 1-60 mapping at the N-terminus of CCK-AR of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CCK-AR (F-6) is available conjugated to agarose (sc-514303 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514303 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514303 PE), fluorescein (sc-514303 FITC), Alexa Fluor® 488 (sc-514303 AF488), Alexa Fluor® 546 (sc-514303 AF546), Alexa Fluor® 594 (sc-514303 AF594) or Alexa Fluor® 647 (sc-514303 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514303 AF680) or Alexa Fluor® 790 (sc-514303 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

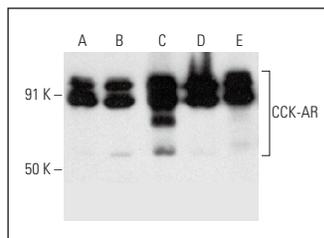
CCK-AR (F-6) is recommended for detection of CCK-AR of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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).

Suitable for use as control antibody for CCK-AR siRNA (h): sc-43670, CCK-AR siRNA (m): sc-108028, CCK-AR siRNA (r): sc-108027, CCK-AR shRNA Plasmid (h): sc-43670-SH, CCK-AR shRNA Plasmid (m): sc-108028-SH, CCK-AR shRNA Plasmid (r): sc-108027-SH, CCK-AR shRNA (h) Lentiviral Particles: sc-43670-V, CCK-AR shRNA (m) Lentiviral Particles: sc-108028-V and CCK-AR shRNA (r) Lentiviral Particles: sc-108027-V.

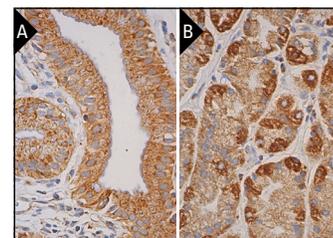
Molecular Weight of CCK-AR: 85-100 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or AMJ2-C8 whole cell lysate: sc-364366.

DATA



CCK-AR (F-6): sc-514303. Western blot analysis of CCK-AR expression in MCF7 (A), HeLa (B), F9 (C), AMJ2-C8 (D) and PC-12 (E) whole cell lysates.



CCK-AR (F-6): sc-514303. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue (A) and human upper stomach tissue (B) showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Plaza, A., et al. 2018. Expression analysis of a cholecystokinin system in human and rat white adipose tissue. *Life Sci.* 206: 98-105.
2. Han, T., et al. 2019. Pioglitazone prevents cholesterol gallstone formation through the regulation of cholesterol homeostasis in guinea pigs with a lithogenic diet. *Lipids Health Dis.* 18: 218.
3. Li, J.H., et al. 2024. Chronic stress induces wide-spread hyperalgesia: the involvement of spinal CCK1 receptors. *Neuropharmacology* 258: 110067.

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.