SYSY Antibodies

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CCK-8

Cat.No. 438 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µl antiserum, lyophilized. For **reconstitution** add 100 µl H_2O, then aliquot and store at -20°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: not tested yet **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 500 **IHC-P (FFPE)**: 1 : 1000 up to 1 : 2000
Immunogen	Synthetic sulfated CCK-8 peptide corresponding to AA 96 to 103 from mouse CCK precursor (UniProt Id: P09240)
Reactivity	Reacts with: mouse (P09240), rat (P01355), human (P06307). Other species not tested yet.
Specificity	The antibody recognizes CCK-8. It may crossreact with the precursor protein and with other peptides of the cholecystokinin family due to sequence homology.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

Cholecystokinin (**CCK**) is synthesized as a preprohormone, which is then converted into multiple isoforms. The sulphated octapeptide amide **CCK-8** exists as the predominant form of CCK in neurons. CCK is widely distributed in several brain regions, including hypothalamus, hippocampus, amygdala nuclei, and cortical regions. In the periphery, CCK peptides are mainly produced in small intestinal endocrine I-cells and in neurons of the enteric nervous system.
CCK plays important physiological roles both as a neuropeptide in the central nervous system and as a peptide hormone in the gut. It is released rapidly into the circulation in response to a meal. The greatest stimulator of CCK release is the presence of fatty acids and/or certain amino acids in the chyme entering the duodenum. CCK peptides stimulate pancreatic enzyme secretion and growth, gallbladder contraction, gut motility, and inhibit gastric acid secretion.
In the central nervous system, CCK acts as a neurotransmitter and neuromodulator regulating both the electrical activity of neurons and the release of other neuropeptides. It is involved in feeding, satiety, pain, anxiety, and memory processes.

Selected References for 438 004

Targeted proteoform mapping uncovers specific Neurexin-3 variants required for dendritic inhibition.
Hauser D, Behr K, Konno K, Schreiner D, Schmidt A, Watanabe M, Bischofberger J, Scheiffele P
Neuron (2022) 11013: 2094-2109.e10. . **IHC; tested species: mouse**

Parasites trigger epithelial cell crosstalk to drive gut-brain signalling.
Touhara KK, Xu J, Castro J, Liang HE, Li G, Brizuela M, Harrington AM, Garcia-Caraballo S, O'Donnell T, Neumann D, Rossen ND, et al.
Nature (2026) : . . **IHC; tested species: mouse**

INSIHGT: an accessible multi-scale, multi-modal 3D spatial biology platform.
Yau CN, Hung JTS, Campbell RAA, Wong TCY, Huang B, Wong BTY, Chow NKN, Zhang L, Tsoi EPL, Tan Y, Li JJX, et al.
Nature communications (2024) 151: 10888. . **IHC; tested species: mouse**

The role of subicular VIP-expressing interneurons on seizure dynamics in the intrahippocampal kainic acid model of temporal lobe epilepsy.
Rahimi S, Salami P, Matulewicz P, Schmuck A, Bukovac A, Ramos-Prats A, Tasan RO, Drexel M
Experimental neurology (2023) 370: 114580. . **IHC; tested species: mouse**

Selected General References

Cholecystokinin-From Local Gut Hormone to Ubiquitous Messenger.
Rehfeld JF et al. Front Endocrinol (Lausanne) (2017) PubMed:28450850

Sticking out of the crowd: the molecular identity and development of cholecystokinin-containing basket cells.
Keimpema E et al. J. Physiol. (Lond.) (2012) PubMed:22219340

Cholecystokinin.
Dockray GJ et al. Curr Opin Endocrinol Diabetes Obes (2012) PubMed:22157397

Cholecystokinin: a multi-functional molecular switch of neuronal circuits.
Lee SY et al. Dev Neurobiol (2011) PubMed:21154912

Access the online factsheet including applicable protocols at https://sysy.com/product/438004 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.