

Cholecystokinin Receptor (CCK₁) Polyclonal Antibody

Product Specifications

Catalog Number:	905-788-100						
Host:	Rabbit						
Species Reactivity:	Rat (predicted to react with human and mouse based on epitope sequence identity) Other species not tested						
Applications:	WB: Yes Membrane ELISA*: Yes Other applications not tested. <i>The optimal dilution for a specific application must be determined by the investigator.</i> <i>*Under certain conditions, this antibody has been shown to display activation-state specificity⁶. The dilution required to achieve activation-state specificity will vary, and should be optimized by the researcher.</i>						
Predicted M.W.:	~50 kDa ⁵						
Concentration:	See product label						
Purification:	Peptide Affinity						
Format:	PBS, 50% glycerol, 0.01% sodium azide						
Storage:	Store at -20°C <i>Shipping conditions may differ from the recommended storage temperature.</i>						
Immunogen:	Synthetic peptide derived from sequence near the amino-terminus of rat Cholecystokinin Receptor (CCK1)						
Related Products:	<table border="0"> <tr> <td>SAB-300</td> <td>Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate</td> </tr> <tr> <td>CSA-550</td> <td>PLC γ 1 (phospho-Tyr783) Polyclonal Antibody</td> </tr> <tr> <td>905-758-100</td> <td>PLC-γ-1 (phospho-Tyr783) Polyclonal Antibody</td> </tr> </table>	SAB-300	Goat anti-Rabbit IgG Polyclonal Antibody, HRP Conjugate	CSA-550	PLC γ 1 (phospho-Tyr783) Polyclonal Antibody	905-758-100	PLC- γ -1 (phospho-Tyr783) Polyclonal Antibody
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Background:

Cholecystokinin (CCK) is a gastrointestinal peptide hormone released by enteroendocrine cells (I cells) of the small intestine and from specific neurons in the myenteric plexus and brain^{1,2}. CCK is generated from a 115 amino acid prepro-CCK polypeptide that is cleaved to form the largest circulating form, CCK-58. Sequential N-terminal cleavage of CCK-58 generates numerous intermediate CCK peptides (CCK-39, -33, -22, -12, and -8) displaying biological activity. The 5 C-terminal amino acids of CCK are identical to those in gastrin, with both peptides sharing a sulfated C-terminal tyrosine residue. CCK regulates numerous gastric processes, including gallbladder contraction, gastric emptying, intestinal motility, pancreatic exocrine secretion, as well as neurological functions including learning and memory, nociception, and satiety. These functions are carried out via two known CCK receptors, CCK₁ and CCK₂, that are members of the family A seven transmembrane domain containing G-protein coupled receptors (GPCRs). CCK₁ displays preferential binding to sulfated CCK, whereas CCK₂ binds both gastrin and CCK with equal affinity. CCK₁ receptors are expressed most prominently in the gastrointestinal tract, and myenteric plexus and vagal afferents, while CCK₂ is expressed in the brain and stomach³. Both CCK₁ and CCK₂ receptors signal primarily through G_{q/11} alpha subunits to stimulate phospholipase C and increase intracellular calcium⁴.

References:

- Dufresne, M., et al. (2004) *Physiol Rev.* **86**, 805-847.
- Chandra, R. and Liddle, R.A. (2007) *Curr Opin Endocrinol Diabetes Obes.* **14**, 63-67.
- Noble, F., et al. (1999) *Pharmacol Rev.* **51**, 745-781.
- Williams, J.A. (2001) *Annu Rev Physiol.* **63**, 77-97.
- Moran, T.H. and Bi, S. (2006) *Philos Trans R Soc Lond B Biol Sci.* **361**, 1211-1218.
- Gupta, A., et al. (2007) *J Biol Chem.* **282**, 5116-5124.



Visit the Scientific Resources section of our website for ELISA, IHC, and WB protocols.

Generally reagents are good for one year from the date of receipt, except for conjugates which are good for six months and reagents with an expiration date indicated on the label or other supporting document.

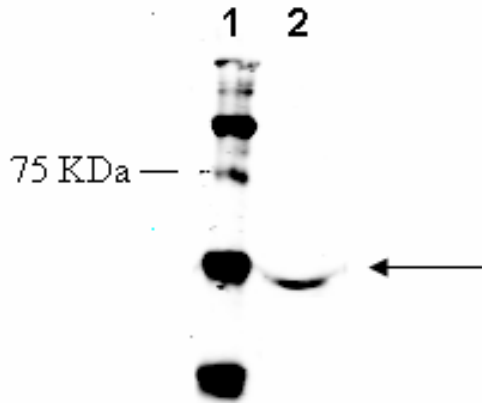
Assay Designs makes every effort to provide a consistent source of high quality polyclonal antibodies. However, due to variations inherent in this technology, investigators are urged to purchase sufficient quantities of a specific lot number if an identical antibody is required throughout a study.

(OVER)

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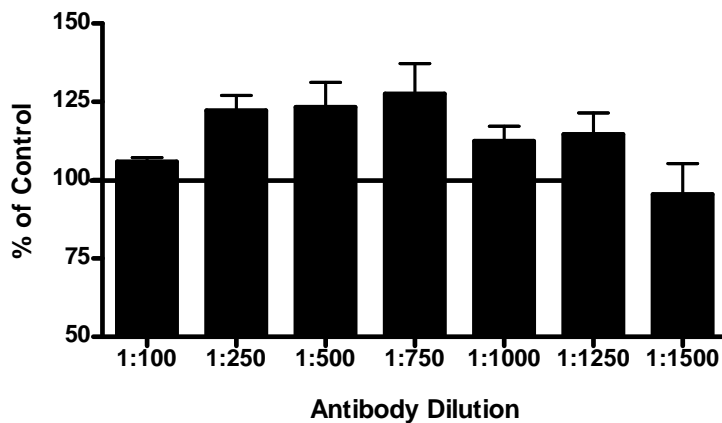
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Western Blot Analysis: MW marker (1) and 50 µg of rat brain membrane extract (2) probed with Cholecystikinin Receptor (CCK₁) Polyclonal Antibody at 4.1 µg/mL.

Striatum Membranes



Membrane ELISA: Lewis rat striatum membranes (5 µg/well) were treated with 1 µM concentrations of agonist (CCK8) and probed with Cholecystikinin Receptor (CCK₁) Polyclonal Antibody (1:100 to 1:500 of a 0.1 µg/µL stock solution) by ELISA. Data from vehicle treated cells were taken as 100%. Results are the mean ± SEM (n=4).