

## CGRP

Cat.No. 414 004; Polyclonal Guinea pig antibody, 100 µl antiserum (lyophilized)

### Data Sheet

|                            |   |
|----------------------------|---|
| Reconstitution/<br>Storage | 100 µl antiserum, lyophilized. For <b>reconstitution</b> add 100 µl H <sub>2</sub> O, then aliquot and store at -20°C until use.<br>Antibodies should be stored at +4°C when still lyophilized. Do not freeze!<br>For detailed information, see back of the data sheet. |
| Applications               | <b>ICC:</b> 1 : 500<br><b>IHC:</b> 1 : 500<br><b>IHC-P:</b> 1 : 1000<br><b>iDISCO:</b> external data (see remarks)<br><b>Clarity:</b> external data (see remarks)   |
| Immunogen                  | Synthetic peptide corresponding to AA 100 to 119 from mouse Calcitonin gene-related peptide 1 (UniProt Id: Q99JA0)  |
| Reactivity                 | Reacts with: mouse (Q99JA0), rat (P01256), human (P06881), monkey.<br>Other species not tested yet.   |
| Specificity                | This antibody recognizes α-CGRP. It may crossreact with the unprocessed precursor protein and with β-CGRP due to sequence homology.   |
| Remarks                    | <b>iDISCO:</b> This antibody has been successfully used for iDISCO according to <a href="#">Samms et al. 2022</a> .<br><b>Clarity:</b> This antibody has been successfully used for CLARITY according to <a href="#">Lowenstein et al. 2023</a> .                       |

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

## Background

**Calcitonin gene-related peptide (CGRP)** is a 37-amino acid peptide produced by alternative splicing of calcitonin gene transcripts. It is characterized by a six amino acid ring structure linked by a disulfide bridge and an amidated C-terminus.

CGRP is present in parafollicular cells (C-cells) of the thyroid and in central and peripheral nerves. It is a potent vasodilator and can function in the transmission of pain. It has a major role in migraine pathophysiology, and CGRP antibodies have been used successfully in immunoneutralization.

## Selected References for 414 004

Sensory innervation of masseter, temporal and lateral pterygoid muscles in common marmosets.  
Hovhannisyan AH, Lindquist K, Belugin S, Mecklenburg J, Ibrahim T, Tram M, Corey T, Salmon A, Ruparel S, Ruparel S, Akopian A, et al.

bioRxiv : the preprint server for biology (2023) : . . **IHC; tested species: marmoset**

Prox2 and Runx3 vagal sensory neurons regulate esophageal motility.  
Lowenstein ED, Ruffault PL, Misios A, Osman KL, Li H, Greenberg RS, Thompson R, Song K, Dietrich S, Li X, Vladimirov N, et al. Neuron (2023) : . . **CLARITY; tested species: mouse**

GIPR Agonism Inhibits PYY-Induced Nausea-Like Behavior.  
Samms RJ, Cosgrove R, Snider BM, Furber EC, Droz BA, Briere DA, Dunbar J, Dogra M, Alsina-Fernandez J, Borner T, De Jonghe BC, et al.

Diabetes (2022) 717: 1410-1423. . **iDISCO; tested species: mouse**

Molecular and functional profiling of cell diversity and identity in the lateral superior olive, an auditory brainstem center with ascending and descending projections.

Maraslioglu-Sperber A, Pizzi E, Fisch JO, Kattler K, Ritter T, Friauf E  
Frontiers in cellular neuroscience (2024) 18: 1354520. . **IHC; tested species: mouse**

## Selected General References

The Parabrachial Nucleus: CGRP Neurons Function as a General Alarm.  
Palmiter RD et al. Trends Neurosci. (2018) PubMed:29703377

CGRP as the target of new migraine therapies - successful translation from bench to clinic.  
Edvinsson L et al. Nat Rev Neurol (2018) PubMed:29691490

CGRP: sensory neuropeptide with multiple neurologic implications.  
Benarroch EE et al. Neurology (2011) PubMed:21768598

Access the online factsheet including applicable protocols  
at <https://sysy.com/product/414004> or scan the QR-code.



## FAQ - How should I store my antibody?

### Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

### Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

### Product Specific Hints for Storage

#### Control proteins / peptides

- Store at -20°C to -80°C.

#### Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

#### Polyclonal Antibodies

- **Crude antisera:** With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies:** Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

#### Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

## Avoid repeated freeze-thaw cycles for all antibodies!

## FAQ - How should I reconstitute my antibody?

### Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein. For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.