

# Clara's cells

**Clara's cells** (also known as "Club cells") are **secretory cells** found in the distal part of the airways. They appear in **terminal bronchioles** where they replace goblet cells. In the distal direction, the number of goblet cells decreases and, conversely, the number of Clara cells increases.

These cells have a nucleus in the middle, the apical surface has no cilia and arches into the lumina. In the cytoplasm are both types of endoplasmic reticulum, Golgi apparatus and **secretory granules**.

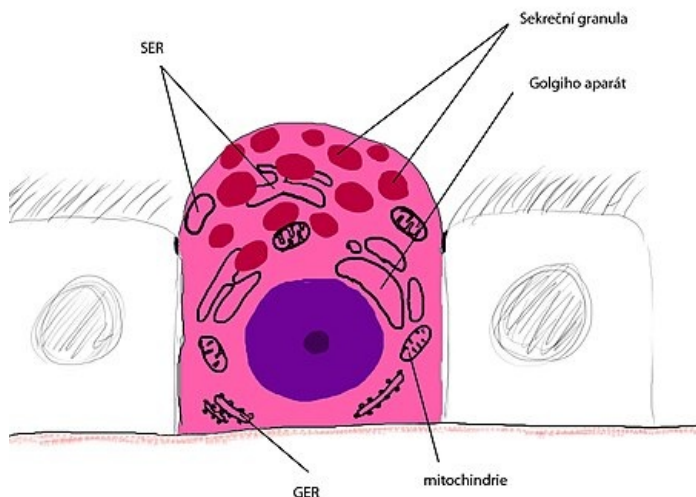
## Cells produce

- surfactant protein **SP-A and SP-D**,
- Clara cell protein **CC10**.

Clara cell products **suppress the inflammatory response** that could damage the airways. In addition, SP-A and SP-D have an antimicrobial function and act as opsonins.

## Origin of the name

Clar cells are named after the Nazi anatomist and physician Max Clar, who performed his inhumane experiments on concentration camp prisoners. For this reason, it is recommended by many professional societies not to use the designation "Clar's cells" and to use "Club cells" instead.



## Links

## Related Articles

Articles:

- Bronchioles (histology)

## References

- LÜLLMANN-RAUCH, Renate. *Histology*. 1. edition. Prague : Grada, 2012. 558 pp. ISBN 9788024737294.
- MESCHER, Anthony L – JUNQUEIRA, Luiz Carlos Uchôa. *Junqueira's Basic Histology*. 12. edition. United States : McGraw-Hill Education - Europe, 2009. 480 pp. ISBN 9780071630207.

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