# Article information:

Band 3, the human red cell chloride/bicarbonate anion exchanger (AE1, SLC4A1), in a structural context - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S000527361630116X>

# Article summary:

1. The Band 3 chloride/bicarbonate anion exchanger 1 (AE1, SLC4A1) is a membrane glycoprotein that plays a key role in respiration.

2. The crystal structure of the dimeric membrane domain of human Band 3 provides new insights into its mechanism of action and explains why mutations lead to disease.

3. Molecular dynamics simulations produced the first molecular model of Band 3 in a lipid bilayer, providing further insight into its structure and function.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article “Band 3, the human red cell chloride/bicarbonate anion exchanger (AE1, SLC4A1), in a structural context” is an informative and comprehensive review of the research conducted on this important membrane glycoprotein over the past four decades. The article presents a detailed overview of the structure and function of Band 3, including its topology, blood group antigens, N-glycosylation site, protease cleavage sites, inhibitor and chemical labeling sites, and mutations linked to various diseases. It also provides insights into how these findings can be placed into a structural context with the help of recent advances such as high-resolution crystal structures and molecular dynamics simulations.

The article is well-written and clearly organized with relevant figures to illustrate key points. It is based on reliable sources such as peer-reviewed journal articles and other published works from reputable authors in the field. The authors provide sufficient evidence for their claims by citing relevant studies throughout the text. Furthermore, they present both sides of any argument fairly without bias or partiality towards any particular point of view or opinion.

In conclusion, this article is trustworthy and reliable due to its comprehensive coverage of the topic at hand as well as its reliance on credible sources for evidence-based claims.

# Topics for further research:

* Band 3 structure
* Band 3 function
* Blood group antigens
* N-glycosylation site
* Protease cleavage sites
* Mutations linked to diseases

# Report location:

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