

Study shows ACKR1 is not expressed on monocytes and macrophages, despite previous conclusions

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Antibodies are among the most frequently used tools in the biosciences, as they enable researchers to identify molecules. However, many

commercial antibodies are not specific enough, with the result that they do not recognize the molecules they are supposed to target.

A team led by Dr. Johan Duchêne (Institute for Cardiovascular Prevention) has now investigated commercial antibodies against the molecule ACKR1, which is expressed on [red blood cells](#), endothelial cells, and some neurons. On [endothelial cells](#), it is an important regulator of inflammation, as it controls the migration of white blood cells into tissue. It had been shown that the malaria pathogen uses ACKR1 to infect red blood cells.

A study from 2016 reported that ACKR1 is also expressed on monocytes and macrophages. This would have influenced prevailing assumptions about the pathophysiological functions of ACKR1 and could raise the question, for example, as to whether the [malaria parasite](#) also infects macrophages and monocytes.

Duchêne has now refuted this study by demonstrating that the [antibodies](#) do not recognize the molecule and ACKR1 is not expressed by macrophages and monocytes. Reproducibility and replicability of research results are important quality criteria in science. As the authors emphasize, their study exemplifies the importance for the scientific community of publishing corrections.

The research was published in *Cell Stem Cell*.

More information: Antal Rot et al, Murine bone marrow macrophages and human monocytes do not express atypical chemokine receptor 1, *Cell Stem Cell* (2022). [DOI: 10.1016/j.stem.2021.11.010](https://doi.org/10.1016/j.stem.2021.11.010)

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