



| | |
|---|---|
| Title: | Glutathione transporters☆ |
| Authors: | Bachhawat, A.K. (/jspui/browse?type=author&value=Bachhawat%2C+A.K.)<br>Thakur, Anil (/jspui/browse?type=author&value=Thakur%2C+Anil)<br>Zulkifli, M. (/jspui/browse?type=author&value=Zulkifli%2C+M.) |
| Keywords: | Glutathione transporter<br>Hgt1p (high affinity glutathione transporter)<br>OPT (oligopeptide transporter family)<br>MRP (multi-drug resistance protein) |
| Issue Date: | 2013 |
| Publisher: | Elsevier |
| Citation: | Biochimica et Biophysica Acta - General Subjects, 1830(5), pp.3154-3164. |
| Abstract: | Background Glutathione (GSH) is synthesized in the cytoplasm but there is a requirement for glutathione not only in the cytoplasm, but in the other organelles and the extracellular milieu. GSH is also imported into the cytoplasm. The transports of glutathione across these different membranes in different systems have been biochemically demonstrated. However the molecular identity of the transporters has been established only in a few cases. Scope of review An attempt has been made to present the current state of knowledge of glutathione transporters from different organisms as well as different organelles. These include the most well characterized transporters, the yeast high-affinity, high-specificity glutathione transporters involved in import into the cytoplasm, and the mammalian MRP proteins involved in low affinity glutathione efflux from the cytoplasm. Other glutathione transporters that have been described either with direct or indirect evidences are also discussed. Major conclusions The molecular identity of a few glutathione transporters has been unambiguously established but there is a need to identify the transporters of other systems and organelles. There is a lack of direct evidence establishing transport by suggested transporters in many cases. Studies with the high affinity transporters have led to important structure-function insights. General significance An understanding of glutathione transporters is critical to our understanding of redox homeostasis in living cells. By presenting our current state of understanding and the gaps in our knowledge the review hopes to stimulate research in these fields. This article is part of a Special Issue entitled Cellular functions of glutathione. |
| Description: | Only IISERM authors are available in the record. |
| URI: | https://www.sciencedirect.com/science/article/pii/S0304416512003388?via%3Dihub (https://www.sciencedirect.com/science/article/pii/S0304416512003388?via%3Dihub)<br>http://hdl.handle.net/123456789/2929 (http://hdl.handle.net/123456789/2929) |
| Appears in Collections: | Research Articles (/jspui/handle/123456789/9) |

Files in This Item:

| File | Description | Size | Format |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Need to add pdf.odt (/jspui/bitstream/123456789/2929/1/Need%20to%20add%20pdf.odt) | 8.63 kB | OpenDocument Text | View/Open (/jspui/bitstream/12345 |

Show full item record (/jspui/handle/123456789/2929?mode=full)

(/jspui/handle/123456789/2929/statistics)