

MDR 1 protein

Also called P-glycoprotein or P-gp 1 or [ATP binding cassette transporter](#) subfamily B member 1 (ABCB1) or cluster of differentiation 243 (CD243) is an important protein of the cell membrane that pumps many foreign substances out of cells. More formally, it is an ATP-dependent efflux pump with broad substrate specificity. It exists in animals, fungi and bacteria and likely evolved as a defense mechanism against harmful substances.

P-gp is extensively distributed and expressed in the intestinal epithelium where it pumps xenobiotics (such as toxins or drugs) back into the intestinal lumen, in liver cells where it pumps them into bile ducts, in the cells of the proximal tubule of the kidney where it pumps them into urine-conducting ducts, and in the capillary endothelial cells composing the blood-brain barrier and blood-testis barrier, where it pumps them back into the capillaries. Some cancer cells also express large amounts of P-gp, which renders these cancers multi-drug resistant.

P-gp is a glycoprotein that in humans is encoded by the ABCB1 gene. P-gp is a well-characterized ABC-transporter (which transports a wide variety of substrates across extra- and intracellular membranes) of the MDR/TAP subfamily.[3]

P-gp was discovered in 1971 by Victor Ling.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=mdr_protein_1

Last update: **2024/06/07 02:54**

