Names for ABCC1 (ISBT 043) Blood Group Alleles

Intro

General description: ABCC1 is also known as MRP1 "Multidrug Resistance Protein 1". It was initially discovered in 1992 in a lung cancer cell line with a multidrug resistance phenotype(1). Cells with an increased expression show a resistance to drugs and xenobiotics. ABCC1 allows for the transport of various substrates involved in oxidative stress homeostasis, inflammation and nucleotide metabolism (efflux pump). In RBCs, ABCC1 has been described as an exporter of glutathione-S-conjugates and ATP.

Gene name: *ABCC1*
Number of exons: 31
Initiation codon: within exon 1
Stop codon: within exon 31
Entrez Gene ID: 4363

LRG: None
Reference sequences: NG_028268.2 (genomic)
                       NM_004996.4 (mRNA transcript)
                       NP_004987.2 (protein)
Reference allele: Preferred: *ABCC1*01* (shaded)

Reference allele
*ABCC*01* encodes: WLF
Antithetical antigens: none

Phenotype	Allele name	Nucleotide change	Exon Intron	Predicted amino acid change	(Reference No.) PMID	Accession number	rs number
ABCC1:1 WLF+	*ABCC1*01*				PMID: pending	NG_028268.2	
ABCC1:-1 WLF−	*ABCC1*01N.01*	intron 21_26del 21249 bp	i21-i26	p.0	(1), Abstract	pending	

References

PMID   1360704   Cole SP, Bhardwaj G, Gerlach JH, Mackie JE, Grant CE, Almquist KC, Stewart AJ, Kurz EU, Duncan AM, Deeley RG. Overexpression of a transporter gene in a multidrug-resistant human lung cancer cell line. Science. 1992 Dec 4; 258(5088):1650-4. doi: 10.1126/science.1360704. Erratum in: Science. 1993 May 14;260(5110):879. PMID: 1360704.

Abstract   (1)   Abstract: H Sugier H, Vrignaud C, Duval R, Le Van Kim C, Arnoni C, Vendrame T, Latini F, De Medeiros R, Castilho L, Azouzi S, Peyrard T. Null Allele of ABCC1 Encoding the Multidrug Resistance Protein 1 Defines a Novel Human Blood Group System. Vox Sanguinis (2020) 115 (Suppl. s1), 3–387, 4A-S21-03

Track of changes

		from	**to**
1	**Version**		**v1.0 31-MAR-2022**
2	Author	created	Jill Storry and Thierry Peyrard, April 2022
3	Review	reviewed	Lilian Castilho, April 2022
4	General	Allele table	First Excel map version. Spread-sheets 'Intro', 'Allele Table', 'References', and 'Versioning' created.
5	**End Version**		**v1.0 31-MAR-2022**