

Names for AUG (ISBT 036) Blood Group Alleles

General description: The Augustine (AUG) blood group system consists of four antigens carried on a multipass membrane glycoprotein equilibrative nucleoside transporter 1 (ENT1). It consists of 456 amino acids with an intracellular amino terminus and extracellular carboxyl terminus.

Gene name: *SLC29A1*
 Number of exons: 13
 Initiation codon: Within exon 1
 Stop codon: Within exon 13
 Entrez Gene ID: 2030
 LRG sequence: NG_042893.1 (genomic)
 NM_001304463.1 (transcript)
 Reference allele: *AUG*01*

Reference allele <i>AUG*01</i> encodes At ^a					
Phenotype	Allele name	Nucleotide change	Exon	Predicted amino acid change	References
At(a+) AUG:1,2,-3,-4	<i>AUG*01</i>				
At(a-) AUG:-2	<i>AUG*02</i>	c.1171G>A	12	p.Glu391Lys	[1]
AUG:3 (ATML+)	<i>AUG*03</i>	c.1159A>C	12	p.Thr387Pro	[2]
AUG:4 (ATAM+)	<i>AUG*04</i>	c.242A>G	4	p. Asn81Ser	[3]
Null phenotype					
AUG:-1	<i>AUG*01N</i>	c.589+1G>C	Intron 6-7	p.Ser197fs	[1]

References

- 1 Daniels G, Ballif B, Helias V, et al. Lack of the nucleoside transporter ENT1 results in the Augustine-null blood type and ectopic mineralization. *Blood* 2015;125(23):3651-4.
- 2 Millard GM, McGowan EC, Wilson B et al. A proposed new low-frequency antigen in the Augustine blood group system associated with a severe case of hemolytic disease of the fetus and newborn. *Transfusio*. 2018;58:1320-1322
- 3 Vrignaud C, Mikdar M, Raneri A, et al. Characterization of a novel high-prevalence red blood cell antigen in the Augustine blood group system. *Vox Sang* 2018;113(Suppl.1):64-5 [Abstract]