

## Names for FORS (ISBT 031) Blood Group Alleles

General description: The FORS blood group system consists of one antigen (rare) and the carbohydrate structure is present in the RBC membrane in the globo-series biosynthetic pathway. The terminal carbohydrate moiety is an extension of the P antigen (globoside, Gb4). The glycosyltransferase that synthesizes the FORS1 antigen consists of 347 amino acids and is considered non-functional in most individuals. In antigen positive individuals the glycosyltransferase is activated due to a point mutation in exon 7.

Gene name: *GBGT1*  
 Number of exons: 7  
 Initiation codon: Within exon 2  
 Stop codon: Within exon 7  
 Entrez Gene ID: 26301  
 LRG sequence: NG\_033868.1 (genomic)  
 NM\_021996.5 (transcript)  
 Reference allele: *GBGT1\*01N.01* (shaded)

Phenotype	Allele name	Nucleotide change	Exon	Predicted amino acid change
FORS:1 (FORS+)	<i>GBGT1*01.01</i>	c.887G>A	7	p.Arg296Gln
FORS:1 (FORS+)	<i>GBGT1*01.02</i>	c.58C>T; c.887G>A	2 7	p.Leu20Phe; p.Arg296Gln
Null phenotypes				
FORS:-1 (FORS-)	<i>GBGT1*01N.01</i>			
FORS:-1 (FORS-)	<i>GBGT1*01N.02</i>	c.58C>T	2	p.Leu20Phe
FORS:-1 (FORS-)	<i>GBGT1*02N</i>	c.363C>A	7	p.Tyr121Ter