

Names for LU (ISBT 005) Blood Group Alleles

General description: The Lutheran blood group system consists of 22 antigens carried on a single pass type 1 membrane glycoprotein (aka CD239, B-CAM) with five disulfide-bonded, extracellular, immunoglobulin superfamily (IgSF) domains, which has adhesion properties and may mediate intracellular signalling. It consists of 597 amino acids.

Gene name: *LU*
Number of exons: 15
Initiation codon: Within exon 1
Stop codon: End of exon 15
Entrez Gene ID: 4059
LRG sequence: NG_007480.1 (genomic)
NM_005581.4 (transcript)
Reference allele: *LU*02* (shaded)
Acceptable: *LU*B*, or *Lu^b* if inferred by haemagglutination

Reference allele <i>LU*02</i> encodes LU2, LU4, LU5, LU6, LU7, LU8, LU12, LU13, LU16, LU17, LU18, LU20, LU21, LU22, LU23, (LU24)				
Phenotype	Allele name	Nucleotide change	Exon	Predicted amino acid change
LU:1 or Lu(a+)	<i>LU*01</i> or <i>LU*A</i>	c.230G>A	3	p.Arg77His
LU:1,19	<i>LU*01.19</i>	c.230G>A; c.1615A>G	3 12	p.Arg77His p.Thr539Ala
LU:2 or Lu(b+)	<i>LU*02</i> or <i>LU*B</i>			
LU:-4	<i>LU*02.-04.1</i>	c.524G>A	5	p.Arg175Gln
LU:-4	<i>LU*02.-04.2</i>	c.524G>T	5	p.Arg175Leu
LU:-5	<i>LU*02.-05</i>	c.326G>A	3	p.Arg109His
LU:-7	<i>LU*02.-07</i>	c.1274A>C	10	p.Glu425Ala
LU:-6,9	<i>LU*02.09</i>	c.824C>T	7	p.Ser275Phe
LU:-8,14	<i>LU*02.14</i>	c.611T>A	6	p.Met204Lys
LU:-12	<i>LU*02.-12.1</i>	c.99_104delGCGCTT	2	p.Arg34_Leu35del
LU:-12	<i>LU*02.-12.2</i>	c.419G>A	3	p.Arg140Gln
LU:-13	<i>LU*02.-13</i>	c.1340C>T; c.1671C>T; c.1742A>T	11 13	p.Ser447Leu; p.Gln581Leu
LU:-16	<i>LU*01.-16</i>	c.230G>A; c.679C>T	3 6	p.Arg77His; p.Arg227Cys
LU:-17	<i>LU*02.-17</i>	c.340G>A	3	p.Glu114Lys
LU:-18,19 or Au(a-b+)	<i>LU*02.19</i>	c.1615A>G	12	p.Thr539Ala
LU:-18,19, -8,14	<i>LU*02.19.14</i>	c.611T>A; c.1615A>G	6 12	p.Met204Lys p.Thr539Ala
LU:-20	<i>LU*02.-20</i>	c.905C>T	7	p.Thr302Met
LU:-21	<i>LU*02.-21</i>	c.282C>G	3	p.Asp94Glu
LU:-22 LURC	<i>LU*02.-22</i>	c.223C>T	3	p.Arg75Cys
LU:-23 LUIT	<i>LU*02.-23</i>	c.469G>A; c.1289C>T	4 10	p.Gly157Arg; p.Thr430Ile
LU:-24 LUGA	<i>LU*02.-24</i>	c.212G>A; c.711C>T; c.714C>T	3 6	p.Arg71His

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LU:-25 LUAC	<i>LU*02.-25</i>	c.662C>T	6	p.Thr221Ile
LU:-26 LUBI	<i>LU*02.-26</i>	c.1495C>T	12	p.Arg499Trp
Null phenotypes				
Lu(a-b-)	<i>LU*02N.01</i>	c.691C>T	6	p.Arg231Ter
Lu(a-b-)	<i>LU*02N.02</i>	322intron2+exon3+intron3+exon4del	3, 4	p.Thr69_Glu168del
Lu(a-b-)	<i>LU*02N.03</i>	c.711C>A	6	p.Cys237Ter
Lu(a-b-)	<i>LU*02N.04</i>	c.361C>T	3	p.Arg121Ter
Lu(a-b-)	<i>LU*02N.05</i>	Ins123GG (?)	2	42Gly-Arg-X (?)