

Names for OK (ISBT 024) Blood Group Alleles

Intro

General description: The OK blood group system consists of 3 antigens carried on a single pass type I membrane glycoprotein with 2 IgSF domains called Basigin (aka CD147, neurothelin, EMMPRIN). It consists of 248 amino acids and has a leader sequence of 21 amino acids, which is cleaved from the membrane bound protein.

Gene name: *OK*
Number of exons: 8
Initiation codon: Beginning of exon 1
Stop codon: End of exon 8
Entrez Gene ID: 682
LRG: LRG_816
LRG sequence: NG_007468.1 (genomic)
NM_001728.4 (transcript)

Reference allele: *OK*01* (shaded)
Acceptable: *OK*A*, or *Ok^a* if inferred by haemagglutination
Reference allele
*OK*01* encodes: OK1, OK2 and OK3

Phenotype	Allele name	Nucleotide change	Exon Intron	Predicted amino acid change	(Reference No.) PMID	Accession number	rs number
OK:1 or Ok(a+)	OK*01.01				PMID: 9130641	L10240	
OK:-1 or Ok(a-)	OK*01.-01	c.274G>A	4	p.Glu92Lys	PMID: 9130641		
OK:-2 or OKGV-	OK*01.-02	c.176G>T	2	p.Gly59Val	(1), Abstract		
OK:-3 or OKVM-	OK*01.-03	c.178G>A	2	p.Val60Met	(2), Abstract		

References

PMID 9130641 Spring FA, Holmes CH, Simpson KL, Mawby WJ, Mattes MJ, Okubo Y, Parsons SF. The Oka blood group antigen is a marker for the M6 leukocyte activation antigen, the human homolog of OX-47 antigen, basigin and neurothelin, an immunoglobulin superfamily molecule that is widely expressed in human cells and tissues. *Eur J Immunol.* 1997 Apr;27(4):891-7.

Abstract (1) Karamatic Crew V et al.. *Transfusion Medicine* 2003 ; 13 : 32 (suppl. 1)

Abstract (2) Karamatic Crew V et al. *Transfusion Medicine* 2006 ; 16 : 41 (suppl.1)

Track of changes

	from	to
1 Version	v4.0 10th April 2019	v5.0 31-MAR-2022
2 Author created	New York Blood Center, 10th April 2019	Yoshihiko Tani, February 2022
3 Reviewer reviewed	n.a.	Frederik Banch Clausen, February 2022
4 General	Word version	First Excel map version. Spread-sheets 'Intro', 'Allele Table', 'References', and 'Versioning' created.
5 References changed numbering		Changed References [1], [2] to Abstract (1), (2)
6 End Version	v4.0 10th April 2019	v5.0 31-MAR-2022

Track of changes

	from	to
1 Version	v4.0 160622	v4.0 10th April 2019
2 Author created	New York Blood Center, 22nd June 2016	New York Blood Center, 10th April 2019
3 Reviewer reviewed	n.a.	n.a.
4 General	Word version	Word version
5 General		Colour changed from red to black
6 Version		Version number changed
7 End Version	v4.0 160622	v4.0 10th April 2019