

Yes (https://www.gephebase.org/search-criteria?/and+Presumptive Null=^Yes^#gephebase-summary-title)	Presumptive Null
Coding (https://www.gephebase.org/search-criteria?/and+Molecular Type=^Coding^#gephebase-summary-title)	Molecular Type
Deletion (https://www.gephebase.org/search-criteria?/and+Aberration Type=^Deletion^#gephebase-summary-title)	Aberration Type
1-9 bp	Deletion Size
1bp deletion predicted to cause premature termination of translation	Molecular Details of the Mutation
Linkage Mapping (https://www.gephebase.org/search-criteria?/and+Experimental Evidence=^Linkage Mapping^#gephebase-summary-title)	Experimental Evidence
Transposon tagging and molecular analysis of the maize regulatory locus opaque-2. (1987) (https://pubmed.ncbi.nlm.nih.gov/2823388)	Main Reference
Schmidt RJ; Burr FA; Burr B	Authors
Genetic analyses suggested that the opaque-2 (<i>o2</i>) locus in maize acts as a positive, transacting, transcriptional activator of the zein seed storage-protein genes. Because isolation of the gene is requisite to understanding the molecular details of this regulation, transposon mutagenesis with the transposable element suppressor-mutator (<i>Spm</i>) was carried out, and three mutable <i>o2</i> alleles were obtained. One of these alleles contained an 8.3-kilobase autonomous <i>Spm</i> , another a 6.8-kilobase nonautonomous <i>Spm</i> , and the third an unidentified transposon that is unrelated to <i>Spm</i> . A DNA sequence flanking the autonomous <i>Spm</i> insertion was verified to be <i>o2</i> -specific and provided a probe to clone a wild-type allele. Northern blots indicated that the gene is expressed in wild-type endosperm but not in leaf tissues or in endosperms homozygous for a mutant allele of the <i>O2</i> gene. A transcript was detected in endosperms homozygous for mutations at opaque-7 and floury-2, an indication that <i>O2</i> expression is independent of these two other putative regulators of zein synthesis.	
Additional References	
Molecular analysis of opaque-2 alleles from <i>Zea mays</i> L. reveals the nature of mutational events and the presence of a hypervariable region in the 5' part of the gene. (1995) (https://pubmed.ncbi.nlm.nih.gov/7750742)	

RELATED GEPHE

No matches found.	Related Genes
	Related Haplotypes
1 (https://www.gephebase.org/search-criteria?/or+Gene Gephebase=^opaque2 (O2)^/and+Taxon ID=^4577^/or+Gene Gephebase=^opaque2 (O2)^/and+Taxon ID=^4577^#gephebase-summary-title)	

EXTERNAL LINKS

COMMENTS