OGG1 KO Mouse

Catalogue number: 151577
Sub-type: Mouse
Images:

Contributor

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Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: OGG1 KO Mouse

Alternate name:

Class:
Conjugate:
Description: OGG1 defect together with MYH defect causes greatly increased frequency of lung cancer. Knockout mice have been generated deficient in the OGG1 DNA glycosylase that excises the most frequent mutagenic oxidative base lesion, 8-oxoG. It has been shown that (i) 8-oxoG residues accumulate in the genome to substantially increased levels in the nonproliferating liver of ogg1 null mice; (ii) there is no excision of 8-oxoG initiated by a different DNA glycosylase in cell-free tissue extracts, but there is significant slow repair in an ogg1 null cell line; (iii) the in vivo spontaneous mutation frequency is increased (2- to 3-fold) in liver but not in more rapidly proliferating testis; and (iv) ogg1 null mice do not show an increased tumor incidence, although inactivating mutations in the OGG1 gene have been documented in a small number of sporadic human lung, kidney, gastric, and head-and-neck tumors.
Purpose:
Parental cell:
Organism:
Tissue:
Model: Knock-Out
Gender:
Isotype:
Reactivity:
Selectivity:
Host:
Immunogen:
Immunogen UNIPROT ID:

Sequence:
Growth properties:
Production details: Briefly, a partial murine OGG1 cDNA clone was isolated by reverse transcription PCR and used to screen a mouse 129SV lambda genomic library. Approximately 4.6 kb of genomic DNA including this motif were replaced by the neomycin-resistance gene/polyadenylation signal (Neo) in the targeting construct by cloning a flanking 3.1-kb XhoI fragment (5') into the XhoI site of pSK-MC1-NEO-poly(A) and a flanking 4.7-kb HindIII fragment (3') into the BamHI site. The targeting vector was electroporated into GK129 embryonic stem (ES) cells from 129SV mice. An ES clone in which homologous recombination had occurred in one allele of the ogg1 gene was expanded from a duplicate plate and injected into blastocysts from C57BL/6J mice. Resultant chimeras were mated and agouti F1 progeny were screened by tail biopsy. Mice heterozygous for the targeted ogg1 allele (+/-) were interbred, and F2 progeny were genotyped.
Formulation:
Recommended controls:
Bacterial resistance:
Selectable markers:
Additional notes:

Target details

Target: OGG1

Target alternate names:

Target background:

Molecular weight:

Ic50:

Applications

Application:
Application notes:

Handling

Format:
Concentration:
Passage number:
Growth medium:
Temperature:
Atmosphere:
Volume:
Storage medium:

Storage buffer:
Storage conditions:
Shipping conditions: Embryo/Spermatoza- Dry Ice

Related tools

Related tools: MEF OGG1 KO Cell Line

References

References: Hser et al. 2001. EMBO J. 20(8):1940-51. PMID: 11296227. ; MEK kinase activity is not necessary for Raf-1 function.