

Analysis of mouse DDB1 and human SMG1

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2005 Fiscal Year Final Research Report Summary

Analysis of mouse DDB1 and human SMG1

Research Project

Project/Area Number

16590045

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

Biological pharmacy

Research Institution

Kanazawa Medical University (2005)

Kanazawa University (2004)

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Project Period (FY)

2004 – 2005

Keywords

DNA damage sensor / NMD / SMG1 / DDB1

Research Abstract

To investigate the biological function of damaged DNA binding 1 (DDB1) and new DNA damage sensor SMG1, we tried knockout or knockdown system of them. At first, to improve the efficiency of shRNA knockdown, we constructed multiple shRNA expression sequences in single plasmid vector, which carries RNA polymerase III promoter. XPA gene was selected for target gene because it is not essential for cell viability and easy to check the functional knockdown by the measurement of repair efficiency or sensitivity. After establishment of stable clones, the efficiency of knockdown was compared among single and triple expression vectors. The single shRNA-expressing vector caused limited knockdown of target protein in stable transfectants, but the multiple expression vectors resulted in significantly increased the frequency of

knockdown transfectants. There were significant correlations between knockdown level and EGFP expression in multiple-expressing transfectants, while poor correlations were obs ...▼ More

Research Products (9 results)

	All	2005	2004	Other
	All	Journal Article	Book	
[Journal Article] UV-B protective effect of a polyacylated anthocyanin, HBA, in flower petals of the blue morning glory, Ipomoea tricolor cv. Heavenly Blue.				2005 ▼
[Journal Article] ナンセンス変異依存mRNA分解機構(NMD)の機構と役割について				2005 ▼
[Journal Article] UV-B protective effect of a polyacylated anthocyanin, HBA, in flower petals of the blue morning glory, Ipomoea tricolor cv. Heavenly Blue.				2005 ▼
[Journal Article] Human NTH1 physically interacts with p53 and proliferating cell.				2004 ▼
[Journal Article] RNAiとmicroRNA				2004 ▼
[Journal Article] マウスを用いた皮膚発がん実験からわかること				2004 ▼
[Journal Article] Human NTH1 physically interacts with p53 and proliferating cell nuclear antigen.				2004 ▼
[Journal Article] 遺伝子発現ノイズの排除とNMD				▼
[Book] 生物の取り扱いを学ぶ I				2005 ▼

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-16590045/165900452005kenkyu_seika_hokoku_

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