

REGULATION OF TRANSCRIPT LEVELS OF GA20-OXIDASE GENE HOMOLOG AND GA-INSENSITIVE GENE HOMOLOG BY LIGHT

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Effects of gibberellin (GA) on the transcript levels of GA20-oxidase gene homolog (GOX2) and GA-insensitive gene homolog (GAI) were examined in green seedlings and etiolated seedlings of rice (Dongjinbyeo). GA20-oxidase gene is thought to be a key regulatory enzyme in the GA-biosynthetic pathway, and GA-insensitive gene is thought to be a negative regulator of GA responses. Greater accumulation of GOX2 transcript occurred in green seedlings than in etiolated seedlings of rice by using northern blot analysis. However, upon treatment of GA, the results were inverted. These results indicated that the expression of GOX2 transcript might be feedback inhibited by light in the presence of GA. GA-induced negative regulation of GAI transcript by light was also presented in this investigation.