

#C626301 : MAJOR MICROBIOLOGY

KEY WORD: ATP SULFURYLASE GENE, SULFUR OXIDIZING BACTERIA

SIRAPHAN SUKONTHASING: CLONING OF ATP SULFURYLASE GENE OF SULFUR-
OXIDIZING BACTERIA ISOLATED FROM NATURAL SOURCES IN THAILAND.

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Gene encoded ATP sulfurylase from bacteria G02, a high efficiency pyritic sulfur oxidizing bacteria isolated from soil in Thailand , was cloned. DNA probe was synthesized by polymerase chain reaction using chromosomal DNA of bacteria G02 as a template. Two oligonucleotides deduced from a high homology region of ATP sulfurylase amino acid sequence of *Riftia pachyptila* bacterial symbiont and *Saccharomyces cerevisiae* were synthesized and used as primers. Transformant harbouring ATP sulfurylase gene was obtained by screening of a genomic library of G02 with DNA probe by colony hybridization technique . Confirmation was done by dot blot hybridization of the extracted recombinant DNA, and by Southern hybridization of the inserted DNA.

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