

**Title of Invention: METHOD FOR PRODUCING NOVEL
NITROGEN-CONTAINING COMPOUND OR SALT THEREOF, AND PRODUCTION
INTERMEDIATE OF SAME**

Field of the Invention

[0001] The present invention relates to a method for manufacturing a novel nitrogen-containing compound or a salt thereof and a manufacturing intermediate of the compound or a salt thereof.

Background Art

[0002] Integrins are a kind of cell adhesion receptors which constitute a family of heterodimeric glycoprotein complexes formed of α and β subunits and are mainly involved in the cell adhesion to extracellular matrix and the transmission of information from extracellular matrix.

Among the integrins, integrins $\alpha_v\beta_3$ and $\alpha_v\beta_5$ which are vitronectin receptors are known to be expressed at a low level on epithelial cells or matured endothelial cells while hyper-expressed in various tumor cells or new blood vessels. The hyper-expression of integrins $\alpha_v\beta_3$ and $\alpha_v\beta_5$ is considered to be involved in the exacerbation of cancer such as infiltration or metastasis accompanying tumor angiogenesis and be highly correlated to the malignancy (Non-Patent Document 1). It has been revealed that the hyper-expression of integrin is observed in cancer such as head and neck cancer, colorectal cancer, breast cancer, small cell lung cancer, non-small cell lung cancer, glioblastoma, malignant melanoma, pancreatic cancer, and prostatic cancer (Non-Patent Document 2).

Furthermore, it has been revealed that, in the integrin-related diseases such as ischemic diseases including an ischemic heart disease or a peripheral vascular disease, the integrin is hyper-expressed in endothelial cells of blood vessels at the time of angiogenesis following ischemia (Non-Patent Document 3).

[0003] The relationship between the aforementioned diseases and the expression of integrin is very interesting as a target of pharmaceutical products, and there are reports relating to the treatment using a low-molecular weight compound (Patent Documents 1 to 4) or a compound into which a radioactive isotope is introduced (Patent Documents 5 to 7) or relating to the imaging of diseases.