US 20060135784A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2006/0135784 A1

MURAO et al. (43) Pub. Date: Jun. 22, 2006

(54) PROCESS FOR PRODUCING 3-AMINO-2-HYDROXYPROPIONIC ACID DERIVATIVES

(75) Inventors: **Hiroshi MURAO**, Kako-gun (JP); **Koki Yamashita**, Kobe-shi (JP); **Toshihiro Takeda**, Takasago-shi (JP); **Yasuyoshi Ueda**, Himeji-shi (JP)

Correspondence Address:
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007 (US)

(73) Assignee: **KANEKA CORPORATION**

(21) Appl. No.: **11/276,222**

(22) Filed: **Feb. 17, 2006**

Related U.S. Application Data

(62) Division of application No. 10/312,208, filed on Jan. 28, 2003, filed as 371 of international application No. PCT/JP01/05440, filed on Jun. 26, 2001.

(30) **Foreign Application Priority Data**

Jun. 26, 2000 (JP) 2000-190949
May 23, 2001 (JP) 2001-154074

Publication Classification

(51) **Int. Cl.**
C07D 263/38 (2006.01)
C07D 263/04 (2006.01)

(52) **U.S. Cl.** **548/229**; 562/557

(57) **ABSTRACT**

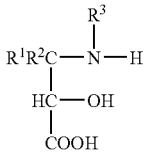
The present invention provides a process for preparing 3-amino-2-hydroxypropionic acid derivatives (1) which does not use dangerous reagents, is economically advantageous, and is suitable for an industrial production, which process comprises:

treating N-protected-3-amino-2-hydroxypropionic acid derivatives (2) having a steric configuration at 2-position carbon reverse to that of derivatives (1) with a leaving group-introducing agent to convert into N-protected-3-aminopropionic acid derivatives (3),

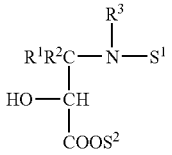
then treating the derivatives with a basic substance to convert into substituted-3-amino-2-hydroxypropionic acid derivatives (4) having an inverted steric configuration at 2-position carbon,

and then converting the derivatives into 3-amino-2-hydroxypropionic acid derivatives (1).

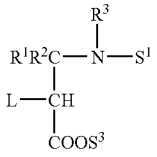
(1)



(2)



(3)



(4)