

**United States Patent** [19]

Cabilly et al.

[11] **Patent Number:** 4,816,567[45] **Date of Patent:** Mar. 28, 1989[54] **RECOMBINANT IMMUNOGLOBIN PREPARATIONS**

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[52] U.S. Cl.: 530/387; 435/68; 435/172.3; 435/320; 435/252.3; 435/252.31; 435/252.33; 435/252.34; 935/10; 935/15; 935/29; 935/73; 530/388

[58] Field of Search: 435/68, 172.3, 240, 435/253, 172.2, 317, 320; 260/112 B; 536/27; 935/11, 15, 27, 29, 73; 530/387, 388

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[57]

**ABSTRACT**

Altered and native immunoglobulins, including constant-variable region chimeras, are prepared in recombinant cell culture. The immunoglobulins contain variable regions which are immunologically capable of binding predetermined antigens. Methods are provided for refolding directly expressed immunoglobulins into immunologically active form.

7 Claims, 15 Drawing Sheets

Sanofi/Regeneron Ex. 1007, pg 161

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Sanofi/Regeneron Ex. 1007, pg 162

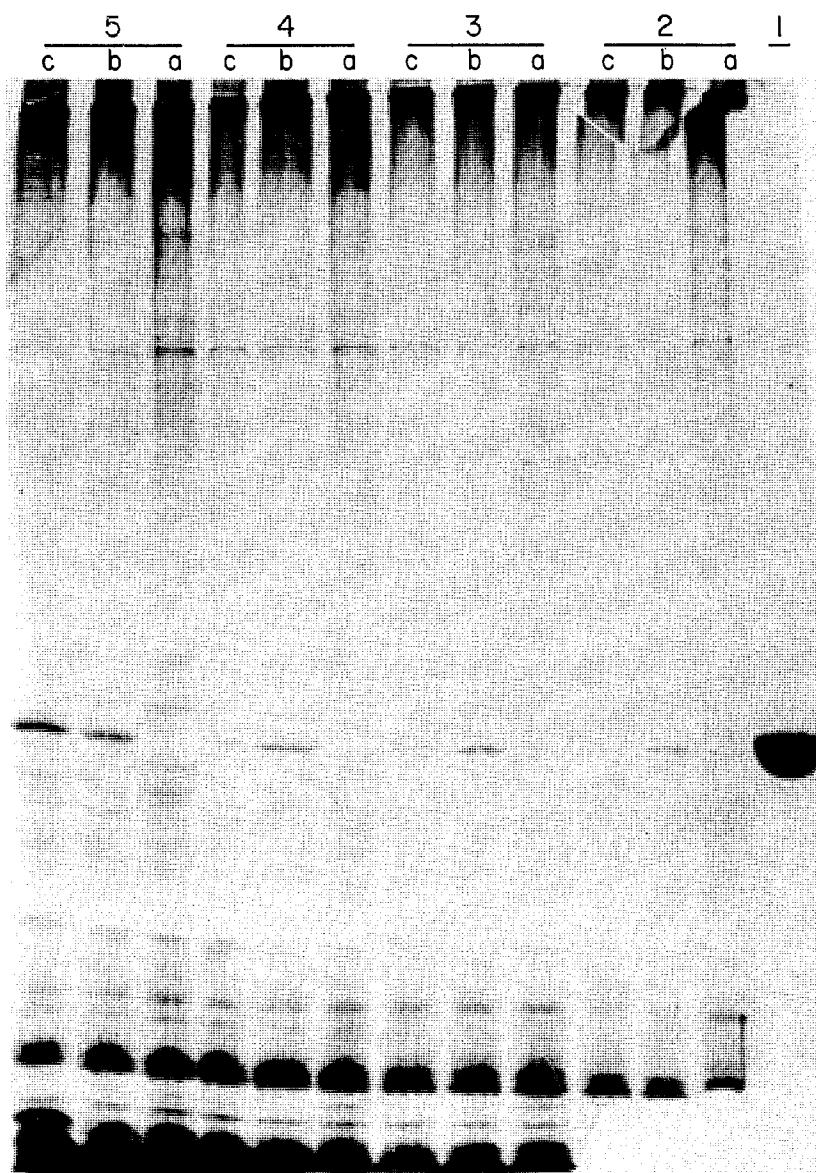
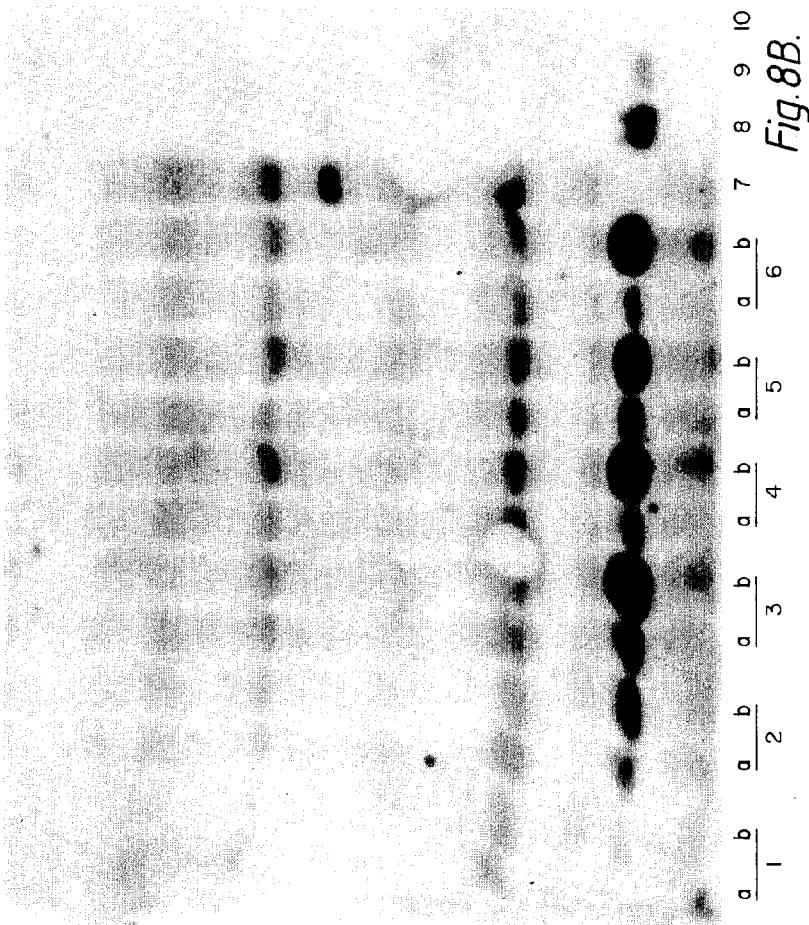


Fig. 8A.

Sanofi/Regeneron Ex. 1007, pg 163



Sanofi/Regeneron Ex. 1007, pg 164

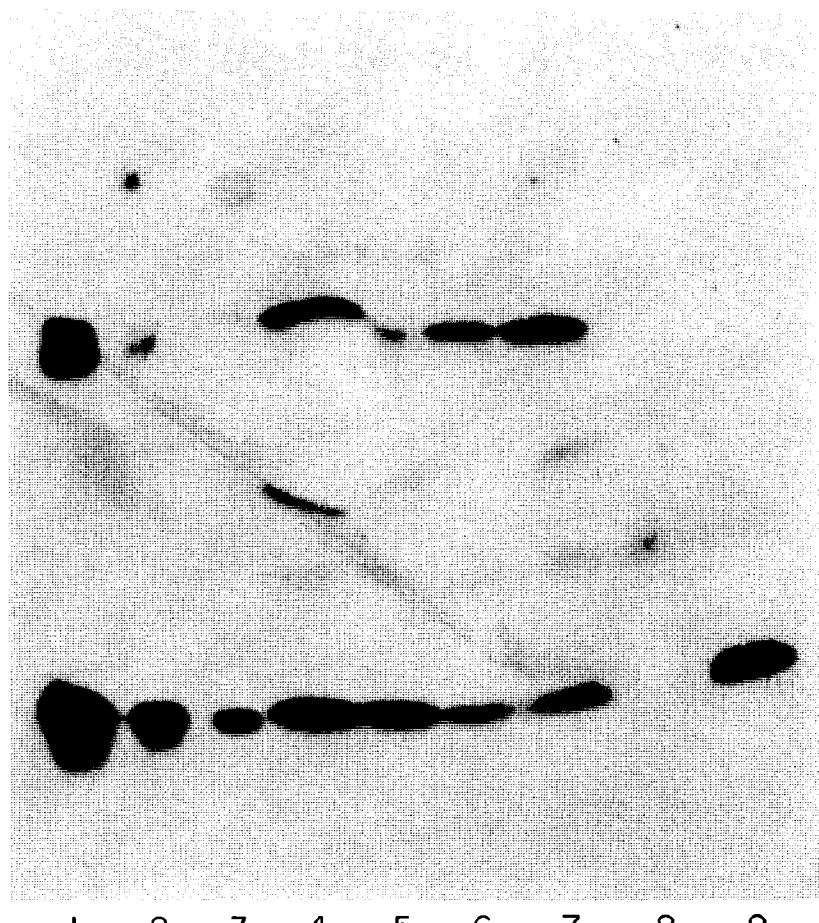


Fig. 8C.

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