

CLAIMS

An antibody, or an antigen-binding fragment thereof, selected from the group consisting of antibodies (1)-(21);

Antibody (1) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:1**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:2**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:3**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:4**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:5**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:6**.

Antibody (2) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:9**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:10**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:11**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:12**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:13**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:14**.

Antibody (3) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:17**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:18**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:19**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:20**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:21**;
and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:22**.

Antibody (4) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:25**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:26**;

- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:27**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:28**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:29**;
and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:30**.

Antibody (5) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:33**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:34**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:35**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:36**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:37**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:38**.

Antibody (6) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:41**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:42**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:43**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:44**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:45**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:46**.

Antibody (7) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:49**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:50**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:51**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:52**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:53**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:54**.

Antibody (8) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:57**;

- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:58**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:59**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:60**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:61**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:62**.

Antibody (9) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:65**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:66**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:67**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:68**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:69**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:70**.

Antibody (10) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:73**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:74**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:75**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:76**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:77**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:78**.

Antibody (11) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:81**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:82**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:83**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:84**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:85**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:86**.

Antibody (12) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:89**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:90**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:91**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:92**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:93**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:94**.

Antibody (13) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:97**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:98**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:99**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:100**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:101**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:102**.

Antibody (14) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:105**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:106**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:107**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:108**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:109**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:110**.

Antibody (15) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:113**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:114**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:115**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:116**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:117**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:118**.

Antibody (16) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:121**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:122**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:123**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:124**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:125**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:126**.

Antibody (17) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:129**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:130**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:131**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:132**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:133**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:134**.

Antibody (18) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:137**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:138**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:139**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:140**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:141**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:142**.

Antibody (19) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:145**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:146**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:147**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:148**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:149**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:150**.

Antibody (20) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:153**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:154**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:155**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:156**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:157**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:158**.

Antibody (21) is characterized by:

- a. a light chain variable domain L-CDR1 comprising **SEQ ID NO:161**;
- b. a light chain variable domain L-CDR 2 comprising **SEQ ID NO:162**;
- c. a light chain variable domain L-CDR 3 comprising **SEQ ID NO:163**;
- d. a heavy chain variable domain H-CDR 1 comprising **SEQ ID NO:164**;
- e. a heavy chain variable domain H-CDR 2 comprising **SEQ ID NO:165**; and
- f. a heavy chain variable domain H-CDR 3 comprising **SEQ ID NO:166**.

2. An antibody according to claim 1, wherein said antibody is further characterized:

Antibody (1) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:8** and a light chain variable domain comprising **SEQ ID NO:7**.

Antibody (2) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:16** and a light chain variable domain comprising **SEQ ID NO:15**.

Antibody (3) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:24** and a light chain variable domain comprising **SEQ ID NO:23**.

Antibody (4) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:32** and a light chain variable domain comprising **SEQ ID NO:31**.

Antibody (5) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:40** and a light chain variable domain comprising **SEQ ID NO:39**.

Antibody (6) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:48** and a light chain variable domain comprising **SEQ ID NO:47**.

Antibody (7) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:56** and a light chain variable domain comprising **SEQ ID NO:55**.

Antibody (8) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:64** and a light chain variable domain comprising **SEQ ID NO:63**.

Antibody (9) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:72** and a light chain variable domain comprising **SEQ ID NO:71**.

Antibody (10) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:80** and a light chain variable domain comprising **SEQ ID NO:79**.

Antibody (11) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:88** and a light chain variable domain comprising **SEQ ID NO:87**.

Antibody (12) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:96** and a light chain variable domain comprising **SEQ ID NO:95**.

Antibody (13) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:104** and a light chain variable domain comprising **SEQ ID NO:103**.

Antibody (14) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:112** and a light chain variable domain comprising **SEQ ID NO:111**.

Antibody (15) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:120** and a light chain variable domain comprising **SEQ ID NO:119**.

Antibody (16) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:128** and a light chain variable domain comprising **SEQ ID NO:127**.

Antibody (17) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:136** and a light chain variable domain comprising **SEQ ID NO:135**.

Antibody (18) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:144** and a light chain variable domain comprising **SEQ ID NO:143**.

Antibody (19) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:152** and a light chain variable domain comprising **SEQ ID NO:151**.

Antibody (20) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:160** and a light chain variable domain comprising **SEQ ID NO:159**.

Antibody (21) is further characterized by a heavy chain variable domain comprising **SEQ ID NO:168** and a light chain variable domain comprising **SEQ ID NO:167**.

3. A pharmaceutical composition comprising an antibody as defined in any of claims 1 or 2 and a pharmaceutically-acceptable carrier.