

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM 8-A

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR (g) OF THE
SECURITIES EXCHANGE ACT OF 1934**

Genmab A/S

(Exact Name of Registrant as Specified in its Charter)

The Kingdom of Denmark
(State or other jurisdiction
of incorporation or organization)

Not Applicable
(I.R.S. Employer
Identification No.)

**Kalvebod Brygge 43
1560 Copenhagen V
Denmark
+45 70 20 27 28**

(Address of principal executive offices and zip code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class to be so registered	Name of each exchange on which each class is to be registered
American Depositary Shares, each representing one-tenth of one ordinary share Ordinary shares, nominal value DKK 1 per share	The NASDAQ Stock Market LLC The NASDAQ Stock Market LLC*

* Not for trading, but only in connection with the registration of the American Depositary Shares on The NASDAQ Stock Market LLC. The American Depositary Shares represent the right to receive the ordinary shares and are being registered under the Securities Act of 1933, as amended, pursuant to a separate Registration Statement on Form F-6. Accordingly, the American Depositary Shares are exempt from the operation of Section 12(a) of the Securities Exchange Act of 1934, as amended, pursuant to Rule 12a-8 thereunder.

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c) or (e), check the following box. x

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d) or (e), check the following box. o

If this form relates to the registration of a class of securities concurrently with a Regulation A offering, check the following box. o

Securities Act registration statement or Regulation A offering statement file number to which this form relates: 333-231777

Securities to be registered pursuant to Section 12(g) of the Act: None

INFORMATION REQUIRED IN REGISTRATION STATEMENT

Item 1. Description of Registrant's Securities to be Registered.

Genmab A/S (the "Registrant") hereby incorporates by reference (a) the description of its ordinary shares, nominal value DKK 1 per share, to be registered hereunder under the heading "Description of Share Capital and Certain Corporate Matters" (b) the description of its American Depositary Shares, each representing one-tenth of one ordinary share, to be registered hereunder contained under the heading "Description of American Depositary Shares," (c) the information set forth under the heading "Material U.S. Federal Income Tax Considerations" and (d) the information set forth under the heading "Material Danish Federal Income Tax Considerations," in each case, in the Registrant's Registration Statement on Form F-1 (File No. 333-231777), as originally filed with the Securities and Exchange Commission (the "Commission") on May 28, 2019, as subsequently amended (the "Registration Statement"), and any prospectus that constitutes part of the Registration Statement and that is subsequently filed by the Registrant with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, which information shall be deemed to be incorporated herein by reference.

Item 2. Exhibits.

Pursuant to the Instructions as to Exhibits with respect to Form 8-A, no exhibits are required to be filed because no other securities of the Registrant are registered on The NASDAQ Stock Market LLC and the securities registered hereby are not being registered pursuant to Section 12(g) of the Securities Exchange Act of 1934, as amended.

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

Genmab A/S

By: /s/ Birgitte Stephensen

Name: Birgitte Stephensen

Title: Senior Vice President, IPR & Legal

Date: July 12, 2019