

**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**

**Lixte Biotechnology Holdings, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of  
incorporation or organization)

**20-2903526**

(I.R.S. Employer  
Identification No.)

**248 Route 25A, No.2 East Setauket, NY**

(Address of principal executive offices)

**11733**

(Zip Code)

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

Title of each class to be so registered

**Common Stock, par value \$0.0001 per share  
Warrants to Purchase Common Stock**

Name of each exchange on which each class is to be registered

**The NASDAQ Stock Market LLC  
The NASDAQ Stock Market LLC**

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. []

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. []

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

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

333-248588 (if applicable)

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

(Title of class)

## INFORMATION REQUIRED IN REGISTRATION STATEMENT

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

This registration statement relates to the registration with the Securities and Exchange Commission (the "Commission") of shares of Common Stock, par value \$0.0001 per share (the "Common Stock"), and Warrants to Purchase Common Stock, par value \$0.0001 per share (the "Warrants"), of Lixte Biotechnology Holdings, Inc. (the "Registrant").

#### Common Stock

The description of the Common Stock being registered pursuant to this Form 8-A that is set forth under the heading "DESCRIPTION OF CAPITAL STOCK" in the prospectus contained in the Registrant's Registration Statement on Form S-1 (Registration No. 333-248588), as initially filed with the Commission on September 3, 2020, and as subsequently amended, is incorporated by reference into this Form 8-A. In addition, any description of such securities contained in a form of prospectus relating to the Registration Statement subsequently filed by the Registrant pursuant to Rule 424(b) under the Securities Act shall be deemed to be incorporated by reference herein.

#### Warrants

The description of the Warrants being registered pursuant to this Form 8-A that is set forth under the heading "DESCRIPTION OF SECURITIES WE ARE OFFERING" in the prospectus contained in the Registrant's Registration Statement on Form S-1 (Registration No. 333-248588), as filed with the Commission on November 16, 2020, is incorporated by reference into this Form 8-A. In addition, any description of such securities contained in a form of prospectus relating to the Registration Statement subsequently filed by the Registrant pursuant to Rule 424(b) under the Securities Act shall be deemed to be incorporated by reference herein.

### Item 2. Exhibits.

Pursuant to the Instructions as to Exhibits for Form 8-A, no exhibits are required to be filed with this Form 8-A because no other securities of the Registrant are registered on The NASDAQ Stock Market LLC and the securities registered pursuant to this Form 8-A 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.

(Registrant) Lixte Biotechnology Holdings, Inc.

Date November 17, 2020

By /s/ John Kovach  
President and Chief Executive Officer

\*Print the name and title of the signing officer under such officer's signature.