

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-A

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

SIGNAL GENETICS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation or organization)

27-4674207
(I.R.S. Employer Identification No.)

667 Madison Avenue, 14th Floor
New York, New York 10065
(Address of principal executive offices) (Zip Code)

Securities to be register 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:**

Common Stock, \$0.01 Par Value

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), 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), check the following box.

Securities Act registration statement file number to which this form relates: 333-194668

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

ITEM 1. DESCRIPTION OF REGISTRANT'S SECURITIES TO BE REGISTERED

Signal Genetics, Inc. (the "Registrant") hereby incorporates by reference herein the description of its Common Stock, par value \$0.01 per share, to be registered hereunder, contained under the heading "Description of Our Securities" in the Registrant's Registration Statement on Form S-1 (File No. 333-194668), as originally filed with the Securities and Exchange Commission (the "Commission") on March 19, 2014, including exhibits, and as amended from time to time thereafter (the "Registration Statement"). In addition, the above-referenced description included in any prospectus relating to the Registration Statement filed with the Commission pursuant to Rule 424(b) under the Securities Act of 1933, as amended, shall be deemed to be incorporated by reference herein.

ITEM 2. EXHIBITS

In accordance with the "Instructions as to Exhibits" with respect to Form 8-A, no exhibits are required to be filed as part of this registration statement 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.

Dated: June 6, 2014

SIGNAL GENETICS, INC.

By: /s/ Samuel D. Riccitelli
Samuel D. Riccitelli, Chief Executive Officer
