

Center for Drug Evaluation and Research  
List of Licensed Biological Products with (1) Reference Product Exclusivity and (2) Biosimilarity or Interchangeability Evaluations to Date

| BLA STN | PRODUCT (PROPER) NAME                | PROPRIETARY NAME  | DATE OF LICENSURE<br>(mo/day/yr) | DATE OF FIRST<br>LICENSURE<br>(mo/day/yr) | REFERENCE PRODUCT<br>EXCLUSIVITY EXPIRY DATE<br>(mo/day/yr) | INTERCHANGEABLE (I)/<br>BIOSIMILAR (B) | WITHDRAWN |
|---------|--------------------------------------|-------------------|----------------------------------|---|---|--|-----------|
| 125118  | abatacept                            | Orencia           | 12/23/05                         |   |   |  |           |
| 103575  | abciximab                            | ReoPro            | 12/22/94                         | NA  | NA  |  |           |
| 125274  | abobotulinumtoxinA                   | Dysport           | 04/29/09                         |   |   |  |           |
| 125057  | adalimumab                           | Humira            | 12/31/02                         | NA  | NA  |  |           |
| 761024  | adalimumab-atto                      | Amjevita          | 09/23/16                         |   |   | B                                      |           |
| 125427  | ado-trastuzumab emtansine            | Kadcyla           | 02/22/13                         |   |   |  |           |
| 125387  | aflibercept                          | Eylea             | 11/18/11                         |   |   |  |           |
| 103979  | agalsidase beta                      | Fabrazyme         | 04/24/03                         | NA  | NA  |  |           |
| 125431  | albiglutide                          | Tanzeum           | 04/15/14                         |   |   |  |           |
| 103293  | aldesleukin                          | Proleukin         | 05/05/92                         | NA  | NA  |  |           |
| 103948  | alemtuzumab                          | Campath, Lemtrada | 05/07/01                         | NA  | NA  |  |           |
| 125141  | alglucosidase alfa                   | Myozyme           | 04/28/06                         |   |   |  |           |
| 125291  | alglucosidase alfa                   | Lumizyme          | 05/24/10                         |   |   |  |           |
| 125559  | alirocumab                           | Praluent          | 07/24/15                         |   |   |  |           |
| 103172  | alteplase, cathflo activase          | Activase          | 11/13/87                         | NA  | NA  |  |           |
| 103950  | anakinra                             | Kineret           | 11/14/01                         | NA  | NA  |  |           |
| 125513  | asfotase alfa                        | Strensiq          | 10/23/15                         |   |   |  |           |
| 101063  | asparaginase                         | Elspar            | 01/10/78                         | NA  | NA  |  |           |
| 125359  | asparaginase erwinia chrysanthemi    | Erwinaze          | 11/18/11                         |   |   |  |           |
| 761034  | atezolizumab                         | Tecentriq         | 05/18/16                         |   |   |  |           |
| 103764  | basiliximab                          | Simulect          | 05/12/98                         | NA  | NA  |  |           |
| 103691  | becaplermin                          | Regranex          | 12/16/97                         | NA  | NA  |  |           |
| 125288  | belatacept                           | Nulojix           | 06/15/11                         |   |   |  |           |
| 125370  | belimumab                            | Benlysta          | 03/09/11                         |   |   |  |           |
| 125085  | bevacizumab                          | Avastin           | 02/26/04                         | NA  | NA  |  |           |
| 761046  | bezlotoxumab                         | Zinplava          | 10/21/16                         |   |   |  |           |
| 125557  | blinatumomab                         | Blinicyto         | 12/03/14                         |   |   |  |           |
| 125388  | brentuximab vedotin                  | Adcetris          | 08/19/11                         |   |   |  |           |
| 125319  | canakinumab                          | Ilaris            | 06/17/09                         |   |   |  |           |
| 103608  | capromab pendetide                   | ProstaScint       | 10/28/96                         | NA  | NA  |  |           |
| 125160  | certolizumab pegol                   | Cimzia            | 04/22/08                         |   |   |  |           |
| 125084  | cetuximab                            | Erbix             | 02/12/04                         | NA  | NA  |  |           |
| 101995  | collagenase                          | Santyl            | 06/04/65                         | NA  | NA  |  |           |
| 125338  | collagenase clostridium histolyticum | Xiaflex           | 02/02/10                         |   |   |  |           |
| 103749  | daclizumab                           | Zenapax           | 12/10/97                         | NA  | NA  |  | Yes       |
| 761029  | daclizumab                           | Zinbryta          | 05/27/16                         |   |   |  |           |
| 761036  | daratumumab                          | Darzalex          | 11/16/15                         |   |   |  |           |
| 103951  | darbepoetin alfa                     | Aranesp           | 09/17/01                         | NA  | NA  |  |           |
| 103767  | denileukin diftitox                  | Ontak             | 02/05/99                         | NA  | NA  |  |           |
| 125320  | denosumab                            | Prolia, Xgeva     | 06/01/10                         |   |   |  |           |
| 125516  | dinutuximab                          | Unituxin          | 03/10/15                         |   |   |  |           |
| 103532  | dornase alfa                         | Pulmozyme         | 12/30/93                         | NA  | NA  |  |           |
| 125469  | dulaglutide                          | Trulicity         | 09/18/14                         |   |   |  |           |
| 125277  | ecallantide                          | Kalbitor          | 12/01/09                         |   |   |  |           |
| 125166  | eculizumab                           | Soliris           | 03/16/07                         |   |   |  |           |
| 125460  | elosulfase alfa                      | Vimizim           | 02/14/14                         |   |   |  |           |
| 761035  | elotuzumab                           | Empliciti         | 11/30/15                         |   |   |  |           |
| 103234  | epoetin alfa                         | Epogen/Procrit    | 06/01/89                         | NA  | NA  |  |           |
| 103795  | etanercept                           | Enbrel            | 11/02/98                         | NA  | NA  |  |           |
| 761042  | etanercept-szszs                     | Erelzi            | 08/30/16                         |   |   | B                                      |           |
| 125522  | evolocumab                           | Repatha           | 08/27/15                         |   |   |  |           |

Center for Drug Evaluation and Research  
List of Licensed Biological Products with (1) Reference Product Exclusivity and (2) Biosimilarity or Interchangeability Evaluations to Date

| BLA STN | PRODUCT (PROPER) NAME                            | PROPRIETARY NAME                 | DATE OF LICENSURE<br>(mo/day/yr) | DATE OF FIRST<br>LICENSURE<br>(mo/day/yr) | REFERENCE PRODUCT<br>EXCLUSIVITY EXPIRY DATE<br>(mo/day/yr) | INTERCHANGEABLE (I)/<br>BIOSIMILAR (B) | WITHDRAWN |
|---------|--|----------------------------------|----------------------------------|---|---|--|-----------|
| 103353  | filgrastim                                       | Neupogen                         | 02/20/91                         | NA  | NA  |  |           |
| 125553  | filgrastim-sndz                                  | Zarxio                           | 03/06/15                         |   |   | B                                      |           |
| 125117  | galsulfase                                       | Naglazyme                        | 05/31/05                         |   |   |  |           |
| 125327  | glucarpidase                                     | Voraxaze                         | 01/17/12                         |   |   |  |           |
| 125289  | golimumab  | Simponi                          | 04/24/09                         |   |   |  |           |
| 125433  | golimumab injection, for IV use                  | Simponi Aria                     | 07/18/13                         |   |   |  |           |
| 125019  | ibritumomab tiuxetan                             | Zevalin                          | 02/19/02                         | NA  | NA  |  |           |
| 761025  | idarucizumab                                     | Praxbind                         | 10/16/15                         |   |   |  |           |
| 125151  | idursulfase                                      | Elaprase                         | 07/24/06                         |   |   |  |           |
| 125360  | incobotulinumtoxinA                              | Xeomin                           | 07/30/10                         |   |   |  |           |
| 103772  | infliximab                                       | Remicade                         | 08/24/98                         | NA  | NA  |  |           |
| 125544  | infliximab-dyyb                                  | Inflectra                        | 04/05/16                         |   |   | B                                      |           |
| 103132  | interferon alfa-2b                               | Intron A                         | 06/04/86                         | NA  | NA  |  |           |
| 103158  | interferon alfa-n3                               | Alferon N Injection              | 10/10/89                         | NA  | NA  |  |           |
| 103628  | interferon beta-1a                               | Avonex                           | 05/17/96                         | NA  | NA  |  |           |
| 103780  | interferon beta-1a                               | Rebif                            | 03/07/02                         | NA  | NA  |  |           |
| 103471  | interferon beta-1b                               | Betaseron                        | 07/23/93                         | NA  | NA  |  |           |
| 125290  | interferon beta-1b                               | Extavia                          | 08/14/09                         |   |   |  |           |
| 103836  | interferon gamma-1b                              | Actimmune                        | 02/25/99                         | NA  | NA  |  |           |
| 125377  | ipilimumab                                       | Yervoy                           | 03/25/11                         |   |   |  |           |
| 125521  | ixekizumab                                       | Taltz                            | 03/22/16                         |   |   |  |           |
| 125058  | laronidase                                       | Aldurazyme                       | 04/30/03                         | NA  | NA  |  |           |
| 125526  | mepolizumab                                      | Nucala                           | 11/04/15                         |   |   |  |           |
| 125164  | methoxy polyethylene glycol-epoetin beta         | Mircera                          | 11/14/07                         |   |   |  |           |
| 125390  | metreleptin                                      | Myalept                          | 02/24/14                         |   |   |  |           |
| 125104  | natalizumab                                      | Tysabri                          | 11/23/04                         | NA  | NA  |  |           |
| 125547  | necitumumab                                      | Portrazza                        | 11/24/15                         |   |   |  |           |
| 125554  | nivolumab  | Opdivo                           | 12/22/14                         |   |   |  |           |
| 125509  | obiltoxaximab                                    | Anthem                           | 03/18/16                         |   |   |  |           |
| 125486  | obinutuzumab                                     | Gazyva                           | 11/01/13                         |   |   |  |           |
| 125422  | ocriplasmin                                      | Jetrea                           | 10/17/12                         |   |   |  |           |
| 125326  | ofatumumab                                       | Arzerra                          | 10/26/09                         |   |   |  |           |
| 761038  | olaratumab                                       | Lartruvo                         | 10/19/16                         |   |   |  |           |
| 103976  | omalizumab                                       | Xolair                           | 06/20/03                         | NA  | NA  |  |           |
| 103000  | onabotulinumtoxinA                               | Botox                            | 12/29/89                         | NA  | NA  |  |           |
| 103694  | oprelvekin                                       | Neumega                          | 11/25/97                         | NA  | NA  |  | Yes       |
| 125103  | palifermin                                       | Kepivance                        | 12/15/04                         | NA  | NA  |  |           |
| 103770  | palivizumab                                      | Synagis                          | 06/19/98                         | NA  | NA  |  |           |
| 125147  | panitumumab                                      | Vectibix                         | 09/27/06                         |   |   |  |           |
| 125511  | parathyroid hormone                              | Natpara                          | 01/23/15                         |   |   |  |           |
| 103411  | pegaspargase                                     | Oncaspar                         | 02/01/94                         | NA  | NA  |  |           |
| 125031  | pegfilgrastim                                    | Neulasta                         | 01/31/02                         | NA  | NA  |  |           |
| 103964  | peginterferon alfa-2a                            | Pegasys                          | 10/16/02                         | NA  | NA  |  |           |
| 125083  | peginterferon alfa-2a co-packaged with ribavirin | Pegasys Copegus Combination Pack | 06/04/04                         | NA  | NA  |  | Yes       |
| 103949  | peginterferon alfa-2b                            | PegIntron, Sylatron              | 01/19/01                         | NA  | NA  |  |           |
| 125499  | peginterferon beta-1a                            | Plegridy                         | 08/15/14                         |   |   |  |           |
| 125293  | pegloticase                                      | Krystexxa                        | 09/14/10                         |   |   |  |           |
| 125514  | pembrolizumab                                    | Keytruda                         | 09/04/14                         |   |   |  |           |
| 125409  | pertuzumab                                       | Perjeta                          | 06/08/12                         | 06/08/12                                  | 06/08/24  |  |           |
| 125477  | ramucirumab                                      | Cyramza                          | 04/21/14                         |   |   |  |           |
| 125156  | ranibizumab                                      | Lucentis                         | 06/30/06                         |   |   |  |           |

Center for Drug Evaluation and Research

List of Licensed Biological Products with (1) Reference Product Exclusivity and (2) Biosimilarity or Interchangeability Evaluations to Date

| BLA STN | PRODUCT (PROPER) NAME | PROPRIETARY NAME | DATE OF LICENSURE<br>(mo/day/yr) | DATE OF FIRST<br>LICENSURE<br>(mo/day/yr) | REFERENCE PRODUCT<br>EXCLUSIVITY EXPIRY DATE<br>(mo/day/yr) | INTERCHANGEABLE (I)/<br>BIOSIMILAR (B) | WITHDRAWN |
|---------|-----------------------|------------------|----------------------------------|---|---|--|-----------|
| 103946  | rasburicase           | Elitek           | 07/12/02                         | NA  | NA  |  |           |
| 125349  | raxibacumab           | raxibacumab      | 12/14/12                         |   |   |  |           |
| 761033  | reslizumab            | Cinqair          | 03/23/16                         |   |   |  |           |
| 103786  | reteplase             | Retavase         | 10/30/96                         | NA  | NA  |  |           |
| 125249  | rilonacept            | Arcalyst         | 02/27/08                         |   |   |  |           |
| 103846  | rimabotulinumtoxinB   | Myobloc          | 12/08/00                         | NA  | NA  |  |           |
| 103705  | rituximab             | Rituxan          | 11/26/97                         | NA  | NA  |  |           |
| 125268  | romiplostim           | Nplate           | 08/22/08                         |   |   |  |           |
| 103362  | sargramostim          | Leukine          | 03/05/91                         | NA  | NA  |  |           |
| 125561  | sebelipase alfa       | Kanuma           | 12/08/15                         |   |   |  |           |
| 125504  | secukinumab           | Cosentyx         | 01/21/15                         |   |   |  |           |
| 125496  | siltuximab            | Sylvant          | 04/23/14                         |   |   |  |           |
| 125294  | tbo-filgrastim        | Granix           | 08/29/12                         | 08/29/12                                  | 08/29/24  |  |           |
| 103909  | tenecteplase          | TNKase           | 06/02/00                         | NA  | NA  |  |           |
| 125276  | tocilizumab           | Actemra          | 01/08/10                         |   |   |  |           |
| 125472  | tocilizumab           | Actemra          | 10/21/13                         |   |   |  |           |
| 103792  | trastuzumab           | Herceptin        | 09/25/98                         | NA  | NA  |  |           |
| 125261  | ustekinumab           | Stelara          | 09/25/09                         |   |   |  |           |
| 761044  | ustekinumab           | Stelara          | 09/23/16                         |   |   |  |           |
| 125476  | vedolizumab           | Entyvio          | 05/20/14                         |   |   |  |           |
| 125418  | ziv-aflibercept       | Zaltrap          | 08/03/12                         |   |   |  |           |
|         |                       |                  |                                  |   |   |  |           |
|         |                       |                  |                                  |   |   |  |           |

**Key -**

**BLA STN:** Biologic License Application Submission Tracking Number

**Product (Proper) Name:** The nonproprietary name designated by FDA for a biological product at the time of licensure under the PHS Act (section 351(a)(1)(B)(i) of the PHS Act and 21 CFR 600.3(k) of the FD&C Act).

**Proprietary Name:** Brand/Trade Name

**Date of Licensure:** The date the application was approved/licensed for marketing. Date of licensure for each application was identified through FDA records.

**Date of First Licensure:** The date from which reference product exclusivity began to run. Under 351(k)(7)(C), the date of first licensure will not be the date a particular application was licensed if that application is a subsequent application filed by the same or related sponsor of the biological product for a change (not including a modification to the structure of its previously approved biological product) that results in a new indication, route of administration, dosing schedule, dosage form, delivery system, delivery device, or strength, or if the change is a modification to the structure of the previously approved biological product that does not result in a change in safety, purity, or potency.

FDA will generally make a determination of date of first licensure for reasons of regulatory necessity and/or at the request of the 351(a) application license holder.

The Agency will denote the date of first licensure as “not applicable” (NA) if:

- The product was licensed under 351(a) and the date it was licensed falls under any exclusion identified in 351(k)(7)(C) or
- More than 12 years (or 12 years and 6 months in the case of a product that has earned pediatric exclusivity) have passed since the date of licensure of the product, and thus any reference product exclusivity that the product may have had would have expired, thus obviating the need for a determination of whether any exclusion under 351(k)(7)(C) applies.

In such cases, a corresponding NA notation will also be placed in the next column, “Reference Product Exclusivity Expiry Date”.

**Reference Product Exclusivity Expiry Date:** The reference product exclusivity expiry date indicates (1) the date that is 12 years from the date of first licensure as described in 351(k)(7); plus (2) any pediatric exclusivity granted pursuant to section 505(A) of the FD&C Act, if applicable. The reference product exclusivity expiry date is the date on which a 351(k) application referencing the reference product may be licensed assuming it is not blocked by orphan exclusivity and otherwise meets the requirements for licensure under 351(k). To determine whether there is unexpired orphan exclusivity for an indication for which the reference product is licensed, please refer to the searchable database for Orphan Designated and/or Approved Products (<http://www.fda.gov/ForIndustry/DevelopingProductsforRareDiseasesConditions/HowtoapplyforOrphanProductDesignation/default.htm>).

For the explanation of the notation “NA,” please see the definition of “Date of First Licensure” above.

**Interchangeable (I)/Biosimilar (B):** Identification of those biological products approved/licensed under 351(k) that were licensed as either interchangeable with or biosimilar to the reference product. Such products will be listed under the 351(a) BLA referenced in the 351(k) application. Biosimilarity has been demonstrated for the condition(s) of use (e.g., indication(s), dosing regimen(s)), strength(s), dosage form(s), and route(s) of administration described in the biosimilar product’s Full Prescribing Information.

**Withdrawn:** The BLA has been withdrawn or is no longer being marketed. This does not specify whether withdrawn for reasons of safety and/or effectiveness.

**Note:** The List of Licensed Biological Products with (1) Reference Product Exclusivity and (2) Biosimilarity or Interchangeability Evaluations reflects all BLAs that were active at the time the “Purple Book” was originally published on September 9, 2014. FDA will continue to update the list when FDA licenses a biological product under section 351(a) or section 351(k) of the PHS Act and/or makes a determination regarding date of first licensure for a biological product licensed under section 351(a) of the PHS Act, and to reflect other changes in the status of these biological products, as appropriate.