

Monoclonal Antibodies for Cancer Treatment

Note these are unconjugated MABs. Conjugates used for cancer therapy are on a separate sheet.

| Drug | Brand name | Platform | Immunoglobulin G subtype | Target |
|------------------|------------|----------------------|--------------------------|------------------------------------|
| Alemtuzumab | Campath | humanized | G1 | CD52 |
| Amivantamab-vmjw | Rybrevant | human | G1 | MET and EGFR |
| Atezolizumab | Tecentriq | humanized | G1 | PD-L1 |
| Avelumab | Bavencio | human | G1 | PD-L1 |
| Belantamab | Blenrep | humanized | G1 | BCMA |
| Bevacizumab | Avastin | humanized | G1 | VEGF |
| Blinatumomab | Blincyto | mouse | G1 | CD3 on T cells and CD19 on B cells |
| Brentuximab | Adcetris | chimeric human/mouse | G1 | CD30 |
| Cemiplimab | Libtayo | humanized from mouse | G4 | PD-1 |
| Cetuximab | Erbix | chimeric human/mouse | G1 | EGFR |
| Daratumumab | Darzalex | human | G1 | CD38 |
| Dinutuximab | Unituxin | chimeric human/mouse | G2 | GD2 |
| Dostarlimab-gxly | Jemperli | humanized | G4 | PD-1 |
| Durvalumab | Imfinzi | human | G1 | PD-L1 |
| Elotuzumab | Emplicit | humanized | G1 | SLAMF7 |
| Ipilimumab | Yervoy | human | G1 | CTLA-4 |
| Isatuximab | Sarclisa | chimeric human/mouse | G1 | CD38 |
| Margetuximab | Margenza | chimeric | G1 | HER2 |

| | | | | |
|------------------------|-----------|-------------------------|----|------------------|
| | | human/mouse | | |
| Mogamulizumab | Poteligeo | humanized | G1 | CCR4 |
| Naxitamab | Danyelza | humanized | G1 | GD2 |
| Necitumumab | Portrazza | human | G1 | EGFR |
| Nivolumab | Opdivo | human | G4 | PD-1 |
| Obinutuzumab | Gazyva | humanized | G1 | CD20 |
| Ofatumumab | Arzerra | human | G1 | CD20 |
| Olaratumab | Lartruvo | human | G1 | PDGFR α |
| Panitumumab | Vectibix | human | G2 | EGFR |
| Pembrolizumab | Keytruda | humanized | G4 | PD-1 |
| Pertuzumab | Perjeta | humanized | G1 | HER dimerization |
| Ramucirumab | Cyramza | human | G1 | VEGFR2 |
| Rituximab | Rituxan | chimeric human/mouse | G4 | CD20 |
| Siltuximab | Sylvant | chimeric human/mouse | G1 | interleukin-6 |
| Tafasitamab-cixix | Monjuvi | humanized | G1 | CD19 |
| Tisotumab vedotin-tftv | Tivdak | human | G1 | CD142 |
| Trastuzumab | Herceptin | humanized | G1 | HER2 |

Immunoglobulin subtype

There are five immunoglobulins in the human body. IgM, IgD, IgG, IgA, and IgE. IgG is the most common and the one that MABs used for cancer therapy are part of. There are four subtypes of IgG: IgG1, IgG2, IgG3, and IgG4. IgG1 (or G1) is the most prevalent in the bloodstream and the one which forms the basis for most MABs.

Targets

CD stands for cluster of differentiation. A scientific method for characterizing cells based on surface molecules that allow different phenotypes to be identified.

CD molecules are often receptors. Monoclonal antibodies used for therapy often exploit this characteristic. They target the molecules and the MAB connects with the cancer cell.

BCMA - B-cell maturation antigen, also called CD269.

CCR4 - C-C chemokine receptor type 4 - CD194

CTLA4 or CTLA-4 (cytotoxic T-lymphocyte-associated protein 4), also known as CD152, protein receptor

EGFR - Epidermal growth factor receptor, a tyrosine kinase receptor

GD2 is a disialoganglioside (a glycolipid) present on surface of some cancer cells

HER2 - human epidermal growth factor receptor 2

PD-L1 - programmed death ligand 1 - aka CD274. The PD-1 (programmed cell death-1) receptor is expressed on the surface of activated T cells. Its ligands, PD-L1 and PD-L2, are expressed on the surface of dendritic cells or macrophages. PD-1 and PD-L1/PD-L2 belong to the family of immune checkpoint proteins that act as co-inhibitory factors that can halt or limit the development of the T cell response.

SLAMF7, CD319, SLAM (signaling lymphocyte activation molecule) family member 7

VEGF - Vascular endothelial growth factor is a signalling protein that promotes the growth of new blood vessels.

<https://callaix.com/types/monoclonal>

