Medicinal Chemistry in SciFinder

Your SciFinder team

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Search Question

- Identify relevant protein checkpoint inhibitors of apoptosis-regulating protein PD-1 with a special focus on antibodies
- Obtain recent patents related to these inhibitors and locate the substance information
The Search History allows for a quick start

- Filter by Result Type:
  - All (49)
  - Patent Markush (40)
  - Reactions (378)
  - References (2,554)
  - Retrosynthesis (172)

- Date:
  - Start Date: mm/dd/yyyy
  - End Date: mm/dd/yyyy

- Search History (5,002)

- March 11, 2020
  - 2:23 PM
    - Substances: Amisulpride (1)
  - 12:24 PM
    - References: pd or "Programmed cell death protein" or "programmed cell death ligand" (608K)

- Boolean and Phrase Search allow for customized precise searches

Rerun Search from history
Biomarkers for predicting efficacy of \textit{pd-1/pd-l1} inhibitors

By: Yi, Ming; Jiao, Dechao; Xu, Hanxiao; Liu, Qian; Zhao, Weiheng; Han, Xinwei; Wu, Kongming

Molecular Cancer (2018), 17, 129/1-129/14 | Language: English, Database: CAplus

A review. \textcolor{blue}{Programmed cell death protein 1 (PD-1)/PD-L1} is a negative modulatory signaling pathway for activation of T cells. It is acknowledged that PD-1/PD-L1 axis plays a crucial role in the progression of tumor by altering status of immune surveillance. As one of the most promising immune therapy strategies, PD-1/ PD-L1 inhibitor is a breakthrough for the therapy of some refractory tumors. However, response rate of PD-1/PD-L1 inhibitors in overall patients is unsatisfactory, which limits the application in clinical practice. Therefore, biomarkers which could effectively predict the efficacy of PD-1/PD-L1 inhibitors are crucial for patient selection. Biomarkers reflecting tumor immune microenvironment and tumor cell intrinsic features, such as PD-L1 expression, d. of tumor infiltrating lymphocyte (TIL), tumor mutational burden, and mismatch-repair (MMR) deficiency, have been noticed to associate with treatment effect of anti-PD-1/anti-PD-L1 therapy. Furthermore, gut microbiota, circulating biomarkers, and patient previous history have been found as valuable predictors as well. Therefore establishing a comprehensive assessment framework involving multiple biomarkers would be meaningful to interrogate tumor immune landscape and select sensitive patients.
Using the search function in the concept filter allows us to focus on keywords related to ‘programmed cell death protein 1’.

All concepts are shown which contain the query terms.

Additional concepts might be selected subsequently.
Analyze all indexed substances, even if based on large answer sets

Get all substances indexed for these 20k documents
Indexed substance set of any size can be effectively filtered to limit to PD-1 antagonists

Relevance ranking brings substances of interest to the top
Substance Class, Bioactivity and Target Indicator filters help us to focus on most relevant compounds.

We focus on antibodies and peptides and limit the substances accordingly.

Bioactivity and Target Indicators are available as filters, also for large answer sets. Filtering restricts our answer set to 3,733 substances.
The Bioactivity Indicators in the detailed record of Nivolumab show the target of interest

CTRL+Click to open detailed record in a new tab

‘Programmed cell death protein 1 inhibitors’ is what we were looking for, click the blue text to go to the respective references
We explore Nivolumab related patents and determine the location of Nivolumab in the full-text with PatentPak.
PatentPak directly shows us where Nivolumab is present in the patent full-text

WO2020028400

This method patent claims the use of one or more of the listed checkpoint inhibitors.

67. The method of claim 66, wherein the anti-cancer agent is an immune checkpoint inhibitor.

68. The method of claim 67, wherein the immune checkpoint inhibitor is an inhibitor of PD-1, PD-L1, LAG-3, Tim-3, CTLA-4, or any combination thereof.

69. The method of claim 67, wherein the immune checkpoint inhibitor is nivolumab, pembrolizumab, ipilimumab, atezolizumab, durvalumab, avelumab, tremelimumab, or any combination thereof.
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