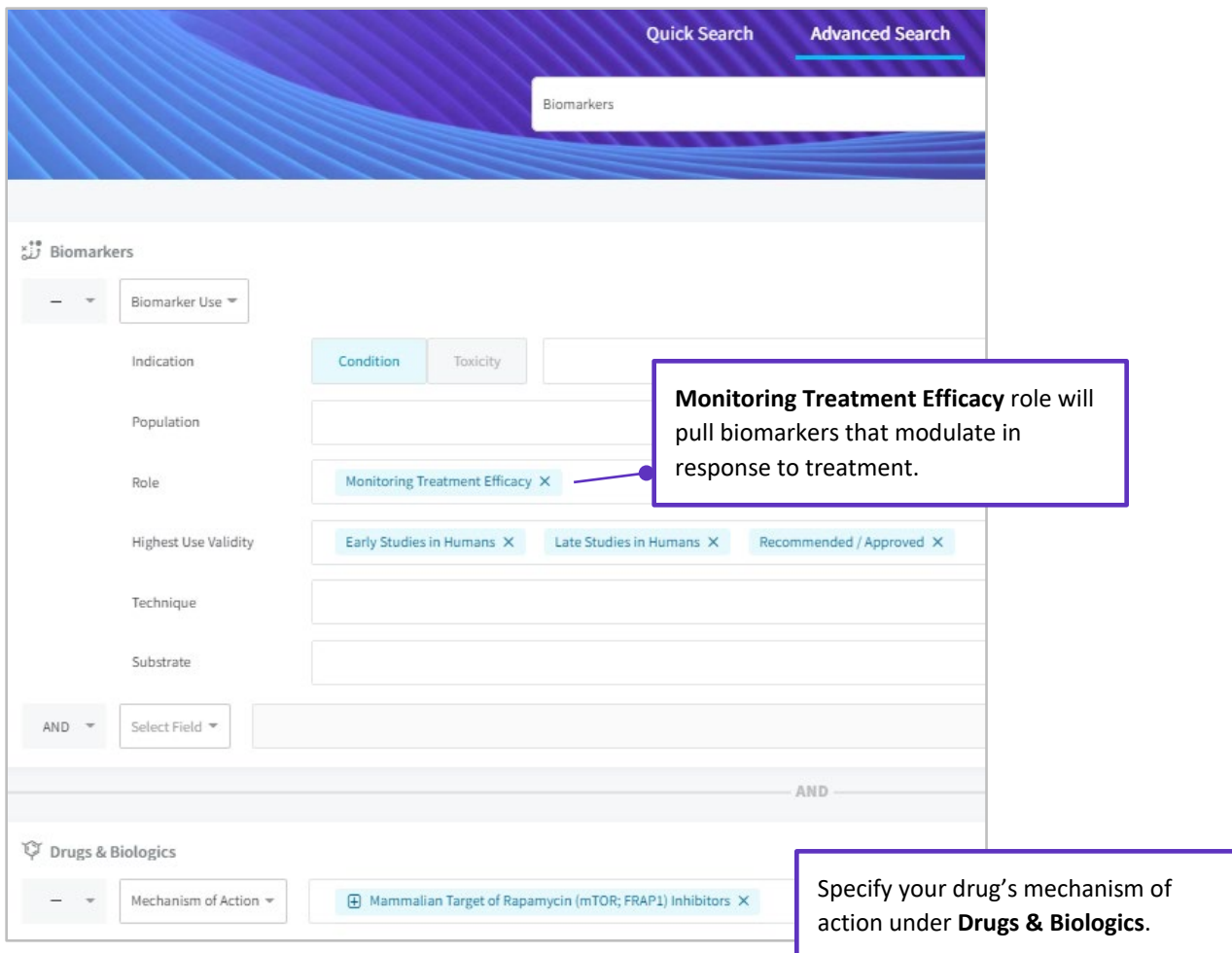


Pharmacodynamic markers for Target Validation

Cortellis Drug Discovery Intelligence

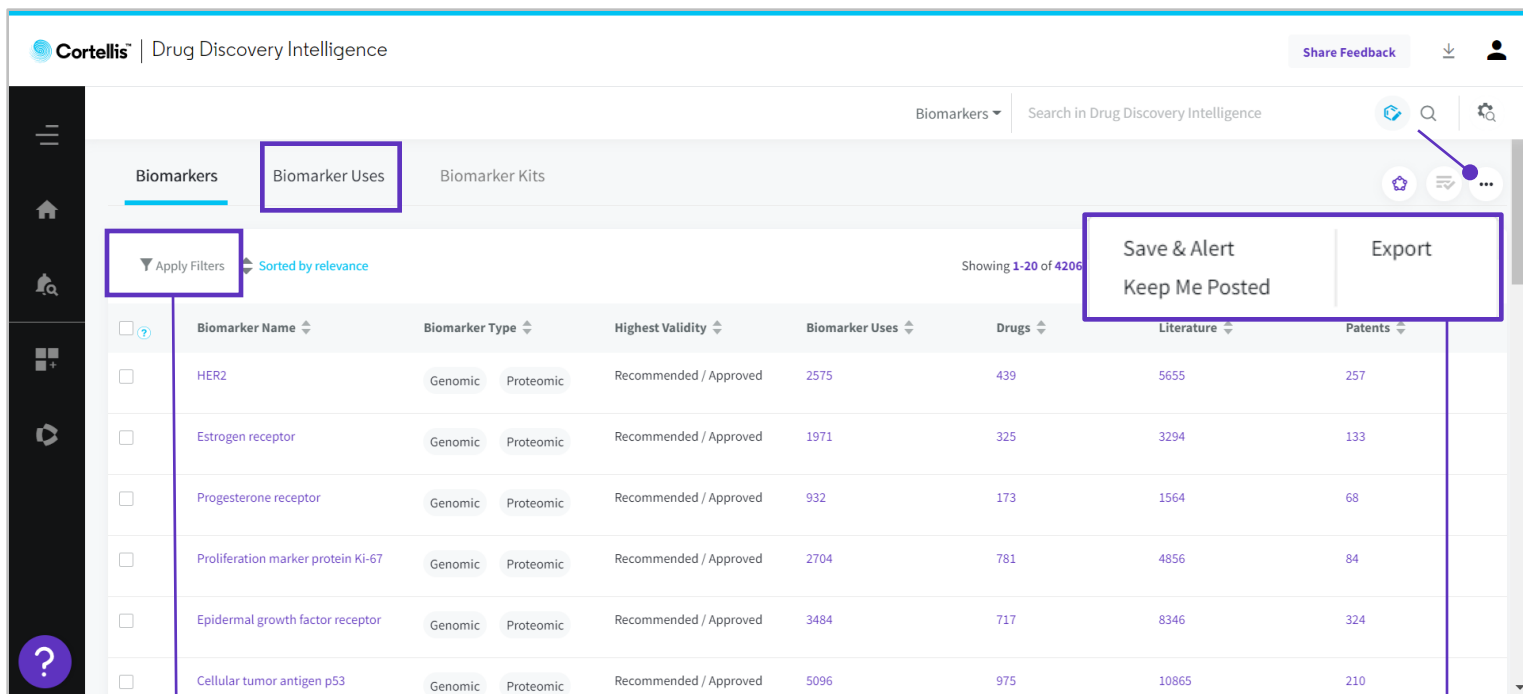
Pharmacodynamic biomarkers can be used as a tool to validate your drug's mechanism of action. In the example below, you are developing a *mammalian target of rapamycin* (mTOR) inhibitor and wish to explore biomarkers that could potentially be used to validate its mechanism in your phase I studies.

1. Use **Advanced Search** to specify biomarker **Role** (monitoring treatment efficacy), **Highest Validity** (at least early studies in humans) and drug's **Mechanism of Action**.



The screenshot shows the 'Advanced Search' interface in the Cortellis platform. The top navigation bar includes 'Quick Search' and 'Advanced Search' (which is active). Below the navigation bar is a search bar labeled 'Biomarkers'. The main search area is divided into two sections: 'Biomarkers' and 'Drugs & Biologics'. In the 'Biomarkers' section, the 'Role' field is set to 'Monitoring Treatment Efficacy', and the 'Highest Use Validity' field is set to 'Early Studies in Humans', 'Late Studies in Humans', and 'Recommended / Approved'. A callout box points to the 'Monitoring Treatment Efficacy' role with the text: 'Monitoring Treatment Efficacy role will pull biomarkers that modulate in response to treatment.' In the 'Drugs & Biologics' section, the 'Mechanism of Action' field is set to 'Mammalian Target of Rapamycin (mTOR; FRAP1) Inhibitors'. A callout box points to this field with the text: 'Specify your drug's mechanism of action under **Drugs & Biologics**.'

- On your results page, you will find a list of **pharmacodynamic markers** that have been used in humans to monitor the effect of mTOR inhibitors. Navigate to the **Biomarker Uses** tab to see additional contextual information.



The screenshot shows the Cortellis Drug Discovery Intelligence interface. The 'Biomarker Uses' tab is selected. A table displays biomarker data with columns for Biomarker Name, Biomarker Type, Highest Validity, Biomarker Uses, Drugs, Literature, and Patents. The table is sorted by relevance. Action buttons for 'Apply Filters', 'Save & Alert', 'Keep Me Posted', and 'Export' are visible.

Biomarker Name	Biomarker Type	Highest Validity	Biomarker Uses	Drugs	Literature	Patents
HER2	Genomic Proteomic	Recommended / Approved	2575	439	5655	257
Estrogen receptor	Genomic Proteomic	Recommended / Approved	1971	325	3294	133
Progesterone receptor	Genomic Proteomic	Recommended / Approved	932	173	1564	68
Proliferation marker protein Ki-67	Genomic Proteomic	Recommended / Approved	2704	781	4856	84
Epidermal growth factor receptor	Genomic Proteomic	Recommended / Approved	3484	717	8346	324
Cellular tumor antigen p53	Genomic Proteomic	Recommended / Approved	5096	975	10865	210

Use **Apply Filters** to identify trends in your results, such as **Techniques** and **Substrates** used in the experiments

Go to **Options** for Exports and Alerts

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