

# PRODUCT INFORMATION



## Pexidartinib

Item No. 18271

**CAS Registry No.:** 1029044-16-3  
**Formal Name:** N-[5-[(5-chloro-1H-pyrrolo[2,3-b]pyridin-3-yl)methyl]-2-pyridinyl]-6-(trifluoromethyl)-3-pyridinemethanamine

**Synonym:** PLX3397

**MF:** C<sub>20</sub>H<sub>15</sub>ClF<sub>3</sub>N<sub>5</sub>

**FW:** 417.8

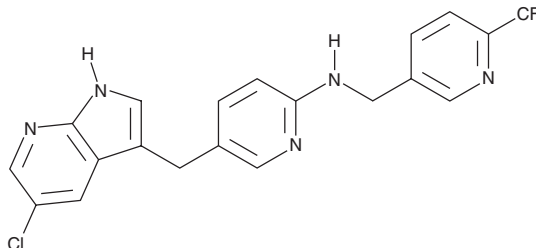
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 235, 303 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Pexidartinib is supplied as a crystalline solid. A stock solution may be made by dissolving the pexidartinib in the solvent of choice, which should be purged with an inert gas. Pexidartinib is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of pexidartinib in these solvents is approximately 20 mg/ml.

Pexidartinib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pexidartinib should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Pexidartinib has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Colony stimulating factor 1 (CSF1) is a cytokine that is involved in the recruitment and activation of tissue macrophages. It exerts these effects by binding to its corresponding receptor tyrosine kinase, the cFMS/CSF1 receptor (CSF1R). Pexidartinib is a brain-penetrant inhibitor of CSF1R, as well as c-Kit and FLT3 (IC<sub>50</sub>s = 20, 10, and 160 nM *in vitro*, respectively).<sup>1</sup> It has been used in combination with paclitaxel (Item No. 10461) to block macrophage recruitment in mammary tumor-bearing mice, thus slowing primary tumor development and metastasis.<sup>1</sup> Pexidartinib has also been used to block microglial stimulation of glioblastoma invasion in both cell culture and a mouse model of glioblastoma multiforme.<sup>2</sup>

### References

1. DeNardo, D.G., Brennan, D.J., Rexhepaj, E., *et al.* Leukocyte complexity predicts breast cancer survival and functionally regulates response to chemotherapy. *Cancer Discov.* **1**(1), 54-67 (2011).
2. Coniglio, S.H., Eugenin, E., Dobrenis, K., *et al.* Microglial stimulation of glioblastoma invasion involves epidermal growth factor receptor (EGFR) and colony stimulating factor 1 receptor (CSF-1R) signaling. *Mol. Med.* **18**(1), 519-527 (2012).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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