

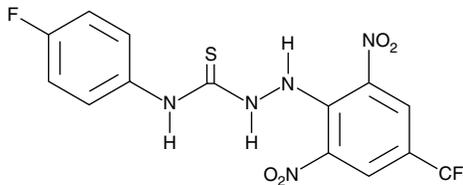
Product Information



Kobe 2602

Item No. 16262

CAS Registry No.: 454453-49-7
Formal Name: 2-[2,6-dinitro-4-(trifluoromethyl)phenyl]-N-(4-fluorophenyl)-hydrazinecarbothioamide
MF: C₁₄H₉F₄N₅O₄S
FW: 419.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 226, 232, 366 nm



Laboratory Procedures

For long term storage, we suggest that Kobe 2602 be stored as supplied at -20°C. It should be stable for at least two years.

Kobe 2602 is supplied as a crystalline solid. A stock solution may be made by dissolving the Kobe 2602 in the solvent of choice. Kobe 2602 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of Kobe 2602 in these solvents is approximately 5, 20, and 10 mg/ml, respectively.

Kobe 2602 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Kobe 2602 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Kobe 2602 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The Ras family of small GTPases (H-Ras, K-Ras, and N-Ras) function as molecular switches, cycling between a GTP-bound active state and a GDP-bound inactive state, to turn on downstream Raf protein kinases. This initiates complex signaling pathways involved in cell growth, differentiation, and apoptosis. Mutations leading to aberrant Ras activation are frequently associated with various human cancers. Kobe 2602 is a selective Ras inhibitor that blocks H-Ras GTP binding to c-Raf-1 (K_i = 149 μM).¹ Kobe 2602 has been shown to inhibit both anchorage-dependent and -independent growth and to induce apoptosis of H-Ras^{G12V}-transformed NIH 3T3 cells (IC₅₀ = 1.4-2 μM).¹ At an oral dose of 80 mg/kg, it also exhibits antitumor activity in mice bearing a xenograft of human colon cancer SW480 cells expressing K-Ras^{G12V}.¹

Reference

1. Shima, F, Yoshikawak, Y., Ye, M., *et al.* In silico discovery of small-molecule Ras inhibitors that display antitumor activity by blocking the Ras-effector interaction. *Proc. Natl. Acad. Sci. USA* **110(20)**, 8182-8187 (2013).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/16262

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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