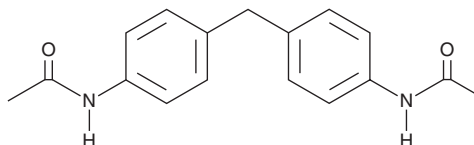


# PRODUCT INFORMATION



**BRD-K4477**  
Item No. 18415

**CAS Registry No.:** 2719-05-3  
**Formal Name:** N,N'-(methylenedi-4,1-phenylene)bis-acetamide  
**Synonyms:** FH1, Functional Hits 1, Methylenebis-4,4'-acetanilide, NSC 12407  
**MF:** C<sub>17</sub>H<sub>18</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 282.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 206, 251 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

BRD-K4477 is supplied as a crystalline solid. A stock solution may be made by dissolving the BRD-K4477 in the solvent of choice, which should be purged with an inert gas. BRD-K4477 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of BRD-K4477 in these solvents is approximately 0.5, 5, and 2 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. For maximum solubility in aqueous buffers, BRD-K4477 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. BRD-K4477 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.

## Description

BRD-K4477, also known as functional hits 1 (FH1), is a small molecule promotor of hepatocyte differentiation *in vitro*.<sup>1</sup> It induces maturation of hepatocyte-like cells (iHeps) to a more adult-like liver phenotype in a concentration-dependent manner. BRD-K4477 increases albumin secretion and promotes hepatocyte morphologies including polygonal cell shapes, visible nuclei, and formation of bile canaliculi in iHeps. It also increases expression of ABCB11 and bile-salt export pump (BSEP) mRNA as well as activity of the mature cytochrome P450 (CYP) isoforms CYP3A and CYP2A6 in iHeps.

## Reference

1. Shan, J., Schwartz, R.E., Ross, N.T., *et al.* Identification of small molecules for human hepatocyte expansion and iPS differentiation. *Nat. Chem. Biol.* **9**(8), 514-520 (2013).

**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.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/10/2022

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM