Acriflavine Hydrochloride
PRODUCT DATA SHEET

issue date 01/06/2020

Product Name:	Acriflavine Hydrochloride
Product Number:	A019
CAS Number:	8063-24-9
Molecular Formula:	$C_{13}H_{11}N_3$ and $C_{14}H_{14}N_3$ •HCl
Molecular Weight:	209.172 and 260.75
Form:	Powder
Appearance:	Brown or orange powder
Storage Conditions:	2-8 °C
Description:	Acriflavine HCl is a type of dye commonly used as a topical antiseptic for skin infections. Acriflavine is freely soluble in aqueous solution. This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for specific questions.
Mechanism of Action:	Acriflavine toxicity arises from its ability to bind to and intercalate DNA. DNA intercalation leads to numerous errors which have a lethal effect on targeted organisms.
Microbiology Applications	Acriflavine has been used in RNA fluorescent labeling applications by RNA hydrolysis using HCl.
Cancer Applications	Acriflavine has been shown to inhibit HIF-1, a heterodimeric transcription factor which responds to hypoxia and facilitates further cancer progress. Acriflavine prevents dimerization of HIF-1 to prevent its role in cancer growth.
References:	Kawai, Mako, and Et Al. "Mechanisms of Action of Acriflavine: Electron Microscopic Study of Cell Wall Changes Induced in Staphylococcus Aureus by Acriflavine."*Microbiology and Immunology* (2009): 481-86. *Onlinelibrary.com*. Web. 29 Aug. 2012. Levinson, J. W. "Fluorescent Labeling of Fragments of High Molecular Weight RNA." Energy Citations. N.p., n.d. Web. 18 Sept. 2012. Lee, K., and Et Al. "Acriflavine Inhibits HIF-1 Dimerization, Tumor Growth, and Vascularization." *Proceedings of the National Academy of Sciences of the United States of America* 106.42 (2009): 17910-7915. *Pnas.org*. 20 Oct. 2009. Web. 20 Sept. 2012.