

PRODUCT INFORMATION

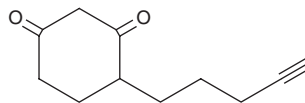


DYn-2

Item No. 11220

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CAS Registry No.: 1354630-46-8
Formal Name: 4-(pent-4-yn-1-yl)cyclohexane-1,3-dione
Synonym: Click Tag™ DYn-2
MF: C₁₁H₁₄O₂
FW: 178.2
Purity: ≥98%
UV/Vis.: λ_{max}: 255 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

DYn-2 is supplied as a crystalline solid. A stock solution may be made by dissolving the DYn-2 in the solvent of choice, which should be purged with an inert gas. DYn-2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DYn-2 in ethanol and DMSO is approximately 20 mg/ml and approximately 30 mg/ml in DMF.

Description

Mild oxidation can convert the sulfhydryl group of cysteine residues on proteins to cysteine-sulfenic acid derivatives (Cys-SOH).¹ Protein sulfenylation, then, is a post-translational modification that is relevant to redox signaling. DYn-2 is a chemoselective probe for detecting sulfenylated proteins in intact cells.² DYn-2 consists of 1,3-cyclohexanedione coupled to an alkyne moiety by a 3-carbon spacer. The cyclohexanedione group selectively reacts with protein sulfenic acid modifications.² The alkyne group of DYn-2 can then be detected using azide-bearing tags by standard click chemistry. This approach offers superior sensitivity relative to using azide-modified probes with alkynyl detection tags.³

References

1. Kettenhofen, N.J. and Wood, M.J. Formation, reactivity and detection of protein sulfenic acids. *Chem. Res. Toxicol.* **23(11)**, 1633-1646 (2010).
2. Paulsen, C.E., Truong, T.H., Garcia, F.J., *et al.* Peroxide-dependent sulfenylation of the EGFR catalytic site enhances kinase activity. *Nat. Chem. Biol.* **8(1)**, 57-64 (2012).
3. Charron, G., Zhang, M.M., Yount, J.S., *et al.* Robust fluorescent detection of protein fatty-acylation with chemical reporters. *J. Am. Chem. Soc.* **131(13)**, 4967-4975 (2009).

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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