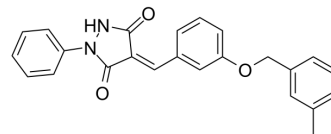


## Y16

|                           |   |       |         |
|---------------------------|---|-------|---------|
| <b>Cat. No.:</b>          | HY-12649  |       |         |
| <b>CAS No.:</b>           | 429653-73-6   |       |         |
| <b>Molecular Formula:</b> | C <sub>24</sub> H <sub>20</sub> N <sub>2</sub> O <sub>3</sub> |       |         |
| <b>Molecular Weight:</b>  | 384   |       |         |
| <b>Target:</b>            | Ras   |       |         |
| <b>Pathway:</b>           | GPCR/G Protein; MAPK/ERK Pathway                              |       |         |
| <b>Storage:</b>           | Powder  | -20°C | 3 years |
|                           |   | 4°C   | 2 years |
|                           | In solvent  | -80°C | 2 years |
|                           |   | -20°C | 1 year  |



### SOLVENT & SOLUBILITY

|   |  |                          |              |            |            |
|---|--|--------------------------|--------------|------------|------------|
| <b>In Vitro</b>   | DMSO : 25 mg/mL (65.10 mM; Need ultrasonic)  |                          |              |            |            |
|   |  | Solvent<br>Concentration | Mass<br>1 mg | 5 mg       | 10 mg      |
|   | <b>Preparing Stock Solutions</b>   | 1 mM                     | 2.6042 mL    | 13.0208 mL | 26.0417 mL |
|   |  | 5 mM                     | 0.5208 mL    | 2.6042 mL  | 5.2083 mL  |
|   |  | 10 mM                    | 0.2604 mL    | 1.3021 mL  | 2.6042 mL  |
| Please refer to the solubility information to select the appropriate solvent. |  |                          |              |            |            |
| <b>In Vivo</b>  | 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline<br>Solubility: 2.5 mg/mL (6.51 mM); Suspended solution; Need ultrasonic<br><br>2. Add each solvent one by one: 10% DMSO >> 90% corn oil<br>Solubility: ≥ 2.5 mg/mL (6.51 mM); Clear solution |                          |              |            |            |

### BIOLOGICAL ACTIVITY

|                                     |   |
|-------------------------------------|---|
| <b>Description</b>                  | Y16 is a specific inhibitor of Leukemia-associated Rho guanine nucleotide exchange factor (LARG) with a K <sub>d</sub> value of 76 nM. Y16 is active in blocking the interaction of LARG and related G-protein-coupled Rho GEFs with RhoA. Y16 shows no detectable effect on other diffuse B-cell lymphoma (Dbl) family Rho GEFs, Rho effectors, or a RhoGAP <sup>[1]</sup> . |
| <b>IC<sub>50</sub> &amp; Target</b> | Kd: 76 nM (LARG) <sup>[1]</sup>   |
| <b>In Vitro</b>                     | Y16 (10-30 μM; 24 hours; NIH 3T3 cells) could inhibit RhoA-GTP formation induced by serum dose dependently and is specific for RhoA <sup>[1]</sup> .<br>Y16 (10-30 μM; 24 hours; NIH 3T3 cells) efficiently inhibits serum or SDF-1α-induced phospho-MLC and phospho-FAK formation, which are downstream of RhoA <sup>[1]</sup> .   |

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### Cell Viability Assay<sup>[1]</sup>

|                  |   |
|------------------|---|
| Cell Line:       | NIH 3T3 cells   |
| Concentration:   | 10 $\mu$ M, 30 $\mu$ M  |
| Incubation Time: | 24 hours  |
| Result:          | Inhibited RhoA-GTP formation induced by serum dose dependently and was specific for RhoA. |

#### Western Blot Analysis<sup>[1]</sup>

|                  |  |
|------------------|--|
| Cell Line:       | NIH 3T3 cells  |
| Concentration:   | 10 $\mu$ M, 30 $\mu$ M   |
| Incubation Time: | 24 hours   |
| Result:          | Inhibited serum or SDF-1 $\alpha$ -induced phospho-MLC and phospho-FAK formation, which were downstream of RhoA. |

## CUSTOMER VALIDATION

- J Cell Mol Med. 2020 Jul;24(14):8179-8193.
- Front Endocrinol. 2021 Feb 4;11:621944.
- Oncol Lett. 2022 Jun;23(6):173.
- J Breast Cancer. 2019 Apr 22;22(2):185-195.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Shang X, et al. Small-molecule inhibitors targeting G-protein-coupled Rho guanine nucleotide exchange factors. Proc Natl Acad Sci U S A. 2013 Feb 19;110(8):3155-60.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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