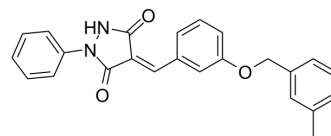


## Y16

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



### SOLVENT & SOLUBILITY

|          |   |                          |           |            |
|----------|---|--------------------------|-----------|------------|
| In Vitro | DMSO : 25 mg/mL (65.10 mM; Need ultrasonic)   |                          |           |            |
|          |   | Solvent<br>Concentration | Mass      |            |
|          |   |                          | 1 mg      | 5 mg       |
|          |   |                          | 10 mg     |            |
|          | Preparing Stock Solutions   | 1 mM                     | 2.6042 mL | 13.0208 mL |
|          | 5 mM  | 0.5208 mL                | 2.6042 mL |            |
|          | 10 mM   | 0.2604 mL                | 1.3021 mL |            |
|          | Please refer to the solubility information to select the appropriate solvent.   |                          |           |            |
| In Vivo  | 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 |                          |           |            |
|          | 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

|                           |   |
|---------------------------|---|
| Description               | 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> . |
| IC <sub>50</sub> & Target | Kd: 76 nM (LARG) <sup>[1]</sup>   |
| In Vitro                  | 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.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA