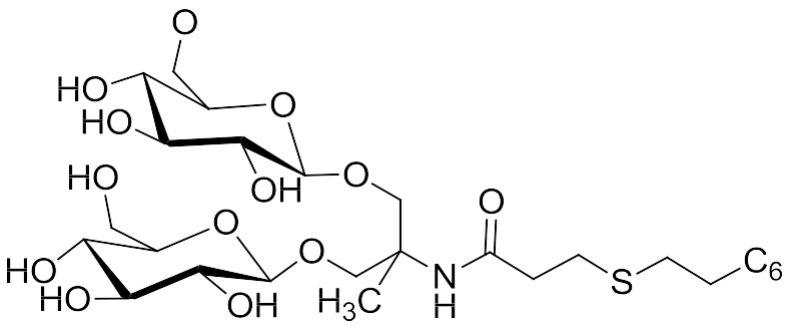
Product Data Sheet

ODG

Information

PRODUCT DETAILS	
Compound Name	ODG
Catalog Numbers	40-D205P-100MG 40-D205P-250MG
Category	Mild detergent
Physical State	White powder
Purity (HPLC, 230 nm)	≥95%
Molecular Formula	$C_{27}H_{51}NO_{13}S$
Retention time (RP_{18} HPLC)	12.9 min
CAS	n/a
CMC	>10 mM
MW	629.8 g/mol
Exact Mass	629.3081 g/mol
pKa	n/a
Percent Composition	C, 51.49; H, 8.16; N, 2.22; O, 33.03; S, 5.09
Stability	Store at -20 °C, out of direct light for a long-term storage
Solubility	Soluble in methanol, DMSO and water (0.5 M)

Structure



Recommendations for Use

For membrane proteins solubilization, Eurofins CALIXAR proprietary mild detergents are typically used at a final concentration of 20 mM. This concentration over 2x CMC (critical micelle concentration) ensures micelles formation and enough detergent to solubilize isolated membranes at a final total protein concentration of 5 mg/mL.

Biochemical Validation

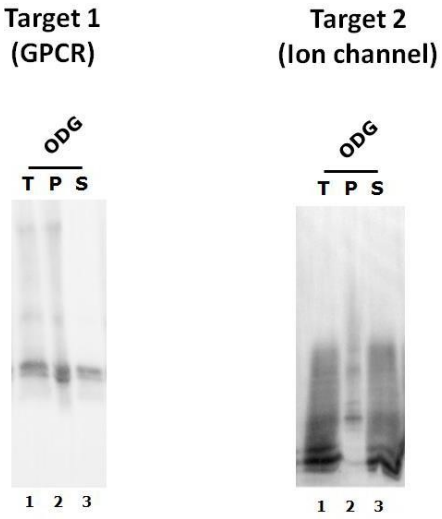
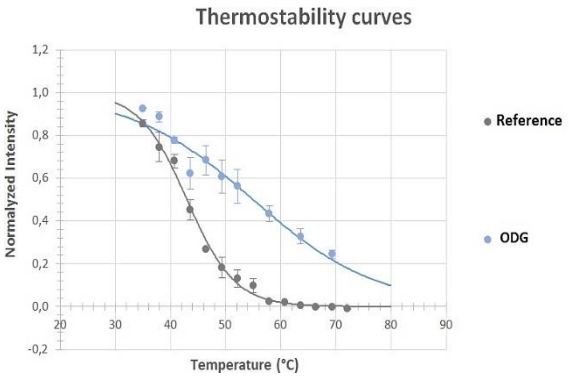


Figure 1: Membrane proteins solubilization by ODG reagent.

The 2 targets were extracted from Sf9 membranes (GPCR) or mammalian membranes (ion channel) by using ODG reagent at 10-fold the critical micelle concentration (cmc). After solubilization, samples were centrifuged at 100000g. Proteins from pellets (P) and supernatants (S) were separated on a 4-15% Tris-glycine SDS-PAGE, transferred to PVDF membrane and immunodetected with a specific antibody.

T = total, P = pellet, S = supernatant.



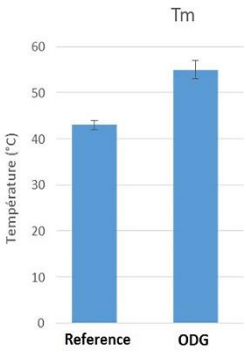


Figure 2: Stabilization of GPCR target

The GPCR protein was extracted using either reference detergent or ODG and heated at different temperatures for 30 min. After centrifugation at 20000g for 40 min, samples were separated on a 4- 15% Tris-glycine SDS-PAGE, transferred to PVDF membrane and immunodetected with a specific antibody. Band intensity was measured, and the resulting graph allowed Tm estimation.

References

- Abla M et al. J Colloid Interface Sci 445: 127 (2015)
- Abla M et al. J Org Chem 73: 8142 (2008).
- Breyton C et al. J Biol Chem 288: 30763 (2013)
- Abla M et al. J Fluorine Chem 134: 63 (2012).
- Guillet P. et al J Langmuir (2019)

Additional Information

Restricted use: Limited Use Label License

The purchase of this product conveys to the purchaser the limited, non-transferable right to use the purchased amount of the product and progeny, to perform internal research and development for the sole benefit of the purchaser.

Safety

Not known as a hazardous substance or mixture. General industrial hygiene practices must be followed as the use of adapted personal protective equipment for skin and body.

Technical support

For additional product and technical information email our Technical Support team at contact@calixar.com.

Limited product warranty

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