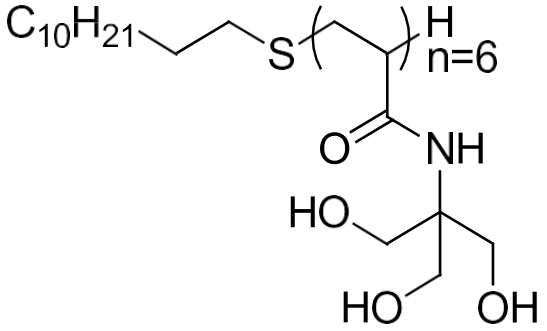
Product Data Sheet
DDTAC

Information

PRODUCT DETAILS	
Compound Name	DDTAC
Catalog Numbers	40-D202P-250MG
Category	Mild detergent
Physical State	Beige powder
Purity (HPLC, 214 nm)	88%
Molecular Formula	$C_{54}H_{104}SO_{24}N_6$
Retention time (RP_{18} HPLC)	11.8 min
CAS	112-55-0
CMC	0.14 mM
MW	1254 g/mol
Exact Mass	n/a
pKa	n/a
Percent Composition	n/a
Stability	Store at -20 °C, out of direct light for a long-term storage
Solubility	Soluble in methanol, DMSO and water (15mM)
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

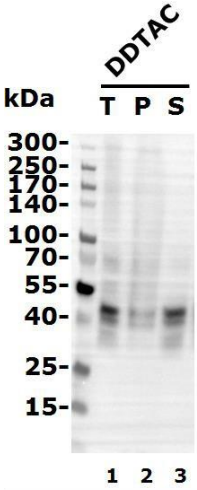


Figure 1: Membrane proteins solubilization from Sf9 membranes by DDTAC reagent.

The target was extracted from Sf9 membranes by using DDTAC 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.

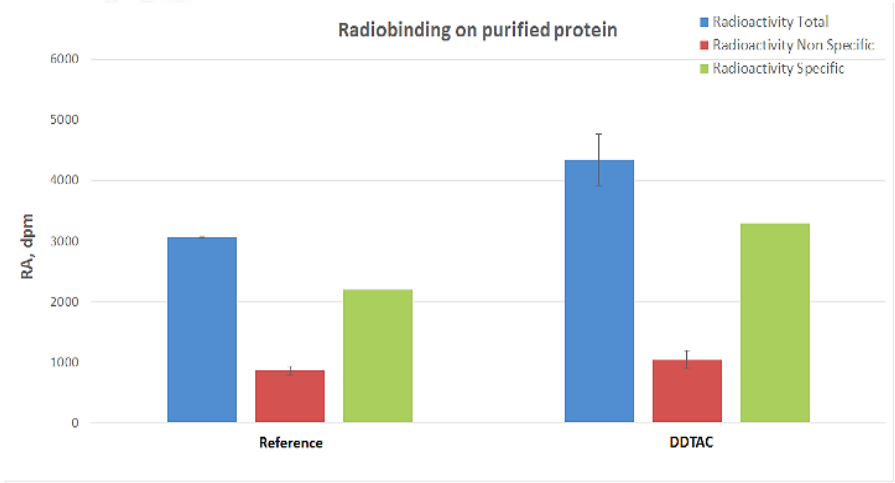


Figure 2: Binding of radioligand on GPCR protein, purified in reference detergent or in DDTAC.

Purified protein was incubated with radioligand in absence (total, blue bars) or presence (Non Specific signal, red bars) of an excess of cold ligand. After filtration on GF/C membranes and washing, scintillation agent was added and radioactivity was detected using a Microbeta2. Specific radioactivity (green bars) corresponds to (total signal) – (non-specific signal).

References

- Talbot, J.-C., A. Dautant, A. Polidori, B. Pucci, T. Cohen-Bouhacina, A. Maali,B. Salin, D. Brethes, J. Velours and M.-F. Giraud (2009). "Hydrogenated and fluorinated surfactants derived from Tris(hydroxymethyl)-acrylamidomethane allow the purification of a highly active yeast F1-F0 ATP-synthase with an enhanced stability." Journal of Bioenergetics and Biomembranes 41(4): 349-360.

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

To the extent allowed by law, eurofins calixar will not be liable for special, incidental, indirect, punitive, multiple, or consequential damages in connection with or arising from this document, including your use of it.