

PRODUCT INFORMATION



DDTAC

Item No. 27741

Formal Name: N¹,N³,N⁵,N⁷,N⁹,N¹¹-hexakis(1,3-dihydroxy-2-(hydroxymethyl)propan-2-yl)-12-(dodecylthio)dodecane-1,3,5,7,9,11-hexacarboxamide

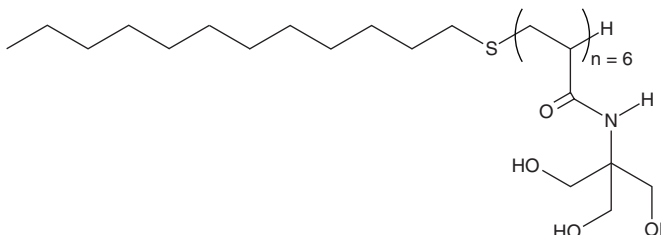
Synonyms: Dodecylmercapto-S-(poly(tris(hydroxymethyl)acrylamidomethane), H₁₂-TAC

Purity: ≥85%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



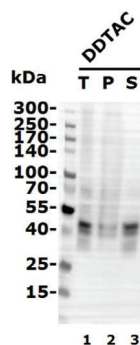
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

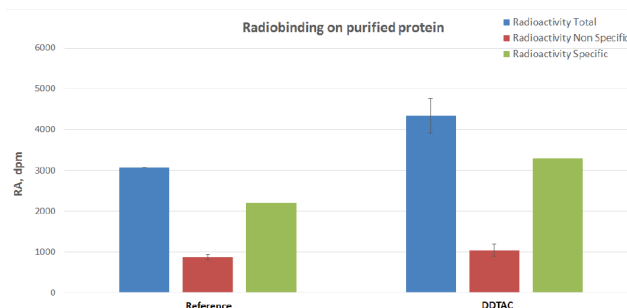
DDTAC is supplied as a solid. A stock solution may be made by dissolving the DDTAC in the solvent of choice. DDTAC is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of DDTAC in these solvents is approximately 20 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of DDTAC can be prepared by directly dissolving the powder in aqueous buffers. The solubility of DDTAC in PBS, pH 7.2, is approximately .25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Images



Membrane protein solubilization from Sf9 membranes. 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 100,000g. 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.



Binding of radioligand on GPCR protein purified in a reference detergent or in DDTAC. Purified protein was incubated with radioligand in the 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).

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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Description

DDTAC is a detergent used to solubilize membrane proteins.¹ It has a critical micelle concentration (CMC) of approximately 0.15 mM. DDTAC has been used to extract yeast ATP synthase from mitochondrial membranes.

Reference

1. Talbot, J.-C., Dautant, A., Polidori, A., *et al.* 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. *J. Bioenerg. Biomembr.* **41**(4), 349-360 (2009).

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