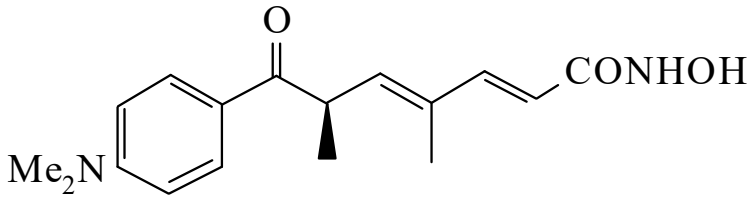
>>**Entry Name: Trichostatin A**
**Synonym(s):** 7-[4-(Dimethylamino)phenyl]-*N*-hydroxy-4,6-dimethyl-7-oxo-2,4-heptadienamide, 9Cl. A 300I. Antibiotic A 300I




**CAS Registry Number:** 58880-19-6

**Molecular Formula:** $C_{17}H_{22}N_2O_3$
**Molecular Weight:** 302.372
**Accurate Mass:** 302.163043
**Percentage Composition:** C 67.53%; H 7.33%; N 9.26%; O 15.87%
**Biological Source:** Isol. from *Streptomyces hygroscopicus* and *Streptomyces sioyaensis*
**Use/Importance:** Antifungal antibiotic. Potent differentiation inducer of Friend leukaemia
**Physical Description:** Powder (EtOAc)
**Melting Point:** Mp 172-174 (150.1°) dec.°
**Optical Rotation:** $[\alpha]_D^{20}$ +62.8 (c, 1.007 in EtOH)
**Solubility:** BERDY SOL: Sol. MeOH, $Et_2O$; poorly sol. hexane, $H_2O$
**UV:** [neutral] $\lambda_{max}$ 252 (sh) (ε 16000); 265 (ε 17600); 341 (ε 19600) (EtOH) (Derep) [neutral] $\lambda_{max}$ 253 (E1%/1cm 477); 263 (ε 23600); 267 (E1%/1cm 495); 341 (E1%/1cm 776); 342 (ε 25100) (MeOH) (Berdy) [base] $\lambda_{max}$ 249 (E1%/1cm 500); 343 (E1%/1cm 800) (MeOH-NAOH) (Berdy) [neutral] $\lambda_{max}$ 264 (ε 24100); 265 (E1%/1cm 582); 341 (E1%/1cm 648); 342 (ε 27000) (EtOH) (Berdy)

**Sigma:** T8552

>>**Derivative:** Fe complex
**Synonym(s): Trichostatin B.** A 300-II. Antibiotic A 300-II

**CAS Registry Number:** 58895-00-4

**Molecular Formula:** $C_{51}H_{66}FeN_6O_9$
**Molecular Weight:** 962.964
**Accurate Mass:** 962.424068
**Percentage Composition:** C 63.61%; H 6.91%; Fe 5.80%; N 8.73%; O 14.95%
**Physical Description:** Dark reddish-purple prisms + $H_2O$ (MeOH)
**Melting Point:** Mp 192 dec.°
**Solubility:** BERDY SOL: Sol. MeOH, $Et_2O$; poorly sol. $H_2O$
**UV:** [neutral] $\lambda_{max}$ 252 (sh) (ε 16000); 265 (ε 17600); 341 (ε 19600) (EtOH) (Derep) [neutral] $\lambda_{max}$ 262 (E1%/1cm 680); 345 (E1%/1cm 920); 450 (E1%/1cm 50) (MeOH) (Berdy) [neutral] $\lambda_{max}$ 277 (E1%/1cm 651); 351 (E1%/1cm 918); 450 (E1%/1cm 50) (EtOH) (Berdy)

>>**Derivative:** *O*-α-D-Glucopyranoside
**Synonym(s): Trichostatin D**

**Molecular Formula:** $C_{23}H_{32}N_2O_8$
**Molecular Weight:** 464.514
**Accurate Mass:** 464.215868
**Percentage Composition:** C 59.47%; H 6.94%; N 6.03%; O 27.55%
**Biological Source:** From *Streptomyces violaceusniger*
**Biological Use/Importance:** Antitumour agent
**Physical Description:** Powder
**Melting Point:** Mp 131-135°
**Optical Rotation:** $[\alpha]_D^{21}$ +183 (c, 0.56 in MeOH)
**UV:** [neutral] $\lambda_{max}$ 267 (ε 27000); 345 (ε 27000) (MeOH)