

RECOVERY

Thymosin Alpha-1

Ta1

Thymic 28-residue immune modulator. Licensed in 35+ countries as Zadaxin.

MECHANISM

TLR 2 / 9 agonism; dendritic-cell maturation; T-cell differentiation

DOSAGE

1.6 mg twice weekly SC

HALF-LIFE

~2 hours

FORMAT

Lyophilised powder

BATCH

NU-THY-9078

LOT

135078

CAS

62304-98-7

FORMULA

C129H215N33O...

ISSUED

2025-11-06

RETEST

2026-11-06

OVERVIEW

Thymosin Alpha-1 is the first 28 amino acids of prothymosin alpha, a naturally occurring thymic peptide hormone. It is an FDA-designated orphan drug and a licensed medicine in 35+ countries (as Zadaxin) for hepatitis B / C, cancer immunotherapy adjunct, and immunocompromised states.

MECHANISM OF ACTION

TLR 2 / 9 agonism; dendritic-cell maturation; T-cell differentiation

KEY RESEARCH BENEFITS

- Licensed in 35+ countries for immune dysfunction
- Enhances T-cell and NK-cell activation
- Antiviral — reduces viral load in hepatitis B / C
- Reduces systemic chronic inflammation (IL-6, TNF-a)
- Adjuvant for immunotherapy and vaccine response

RESEARCH NOTES

Zadaxin Phase III trials (hepatitis B: N = 200; hepatitis C: N = 108) showed significant virological response improvement. Used as a COVID-19 adjunct in Italian ICU protocol (Shi et al., 2022).

STORAGE & STABILITY

Lyophilised: -20 °C, stable >=24 months. Reconstituted: 2-8 °C, use within 14 days.