

DATA SHEET

Product Name: Nitazoxanide

Catalog #: CV-1044

Alt: CAS # 55981-09-4; O-[N-(5-Nitrothiazol-2-yl)carbamoyl]phenyl acetate; NTZ

Molecular Mass: 307.3

Analysis: >98% (HPLC); NMR (conforms)

Supplied As: Off-white powder

Resuspension: May be dissolved in DMSO (50 mg/ml)

Storage: Store desiccated as supplied at -20°C for up to 2 years. Store solutions at -20°C for up to 3 months.

Description:

Nitazoxanide is a clinically useful antiparasitic agent¹. It has since been repurposed as a broad-spectrum antiviral agent that is active against many RNA and DNA viruses including influenza, hepatitis B and C, RSV, coronavirus, dengue and others². Its antiparasitic activity is believed to be due to inhibition of pyruvate:ferredoxin/ flavodoxin oxidoreductases³. Antiviral activity involves activation of protein kinase activated by double-stranded RNA (PKR) leading to phosphorylation of eukaryotic initiation factor 2 alpha (eIF2 α)⁴. Nitazoxanide has also been found to inhibit Wnt signaling independent of adenomatous polyposis coli (APC), targeting peptidyl arginine deiminase 2 (PAD2) resulting in increased citrullination of β -catenin⁵.

References:

1. White, C.A., (2004) Expert Rev. Anti. Infect. Ther., 2 : 43
2. Rossignol, J.F., (2014) Antiviral Res., 110 : 94
3. Hoffman, P.S., et al., (2007) Antimicrob. Agents Chemother., 51 : 868
4. Elazar, M., et al., (2009) Gastroenterology, 137 : 1827
5. Qu, Y., et al., (2018) Nat. Chem. Biol., 14 : 94

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