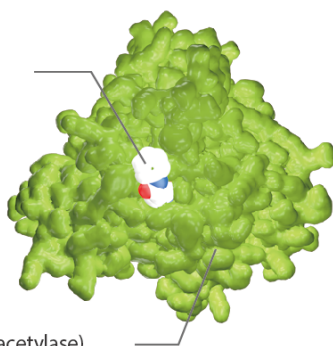


Aldehyde Dehydrogenase (ALDH)

HDAC Inhibitor:
Vorinostat (SAHA)



HDAC (Histone deacetylase)

Aldehyde dehydrogenase 1 (ALDH1), which is a putative marker of breast cancer stem cells (CSCs), in triple negative breast cancer (TNBC) tissues.

Mitochondrial aldehyde dehydrogenase (ALDH2) is a member of the 19-strong human aldehyde dehydrogenase family of NADP⁺-dependent enzymes.

ALDH2, a mitochondrial enzyme responsible for metabolizing the major lipid peroxidation product, protects against acute ischemia/reperfusion injury and chronic heart failure. Activation of ALDH2, the main enzyme that catalyzes 4-HNE metabolism, is sufficient to protect the heart against acute ischemia-reperfusion

injury.

ALDH2 is a key detoxifying enzyme. ALDH2 is most commonly associated with its role in ethanol metabolism, catalyzing the oxidation of ethanol-derived acetaldehyde to acetate.

Aldehyde Dehydrogenase (ALDH) Inhibitors & Modulators

Alda-1 <p style="text-align: right;">Cat. No.: HY-18936</p> <p>Bioactivity: Alda-1 is a potent ALDH2 agonist, which activates wild-type ALDH2 and restores near wild-type activity to ALDH2*2.</p> <p>Purity: 99.81% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</p> 	Disulfiram <p>(Tetraethylthiuram disulfide; TETD)</p> <p style="text-align: right;">Cat. No.: HY-B0240</p> <p>Bioactivity: Disulfiram is a specific inhibitor of aldehyde-dehydrogenase (ALDH1), used for the treatment of chronic alcoholism by producing an acute sensitivity to alcohol.</p> <p>Purity: 98.67% Clinical Data: Launched Size: 10mM x 1mL in DMSO, 1 g, 5 g</p> 
NCT-501 <p style="text-align: right;">Cat. No.: HY-18768</p> <p>Bioactivity: NCT-501 is a potent and selective theophylline-based inhibitor of aldehyde dehydrogenase 1A1 (ALDH1A1), inhibits hALDH1A1 with IC50 of 40 nM, typically shows better selectivity over other ALDH isozymes and other dehydrogenases (hALDH1B1, hALDH3A1, and hALDH2, IC50 > 57 μM). IC50 value: 40 nM...</p> <p>Purity: 99.78% Clinical Data: No Development Reported Size: 10mM x 1mL in DMSO, 5 mg, 10 mg, 50 mg, 100 mg</p> 	NCT-505 <p style="text-align: right;">Cat. No.: HY-112277</p> <p>Bioactivity: NCT-505 is a potent and selective aldehyde dehydrogenase (ALDH1A1) inhibitor, with an IC50 of 7 nM, and weakly inhibits hALDH1A2, hALDH1A3, hALDH2, hALDH3A1 (IC50s, >57, 22.8, 20.1, >57 μM).</p> <p>Purity: >98% Clinical Data: No Development Reported Size: 500 mg, 250 mg</p> 
NCT-506 <p style="text-align: right;">Cat. No.: HY-112278</p> <p>Bioactivity: NCT-506 is an orally bioavailable aldehyde dehydrogenase 1A1 (ALDH1A1) inhibitors with an IC50 of 7 nM ^[1].</p> <p>Purity: >98% Clinical Data: No Development Reported Size: 100 mg, 250 mg, 500 mg</p> 	