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# 11beta-hydroxysteroid Dehydrogenase Type 1 Inhibitor AZD4017

National Cancer Institute

## Source

National Cancer Institute. *11beta-hydroxysteroid Dehydrogenase Type 1 Inhibitor AZD4017*. NCI Thesaurus. Code C148516.

A selective, orally bioavailable inhibitor of the enzyme 11beta-hydroxysteroid dehydrogenase type 1 (11b-HSD1; 11bHSD1; HSD11B1), with potential protective activity. Upon administration, AZD4017 selectively binds to and inhibits the activity of 11b-HSD1. This prevents the conversion of cortisone to the active hormone cortisol that activates glucocorticoid receptors. By blocking cortisol production in metabolic tissues, AZD4017 may inhibit the adverse metabolic effects, such as glucose intolerance, hyperinsulinemia, systolic hypertension, increased adiposity, myoatrophy and dermal atrophy, caused by exogenous administration of glucocorticoids in these tissues. 11bHSD1 is highly expressed in metabolic tissues, such as liver, skeletal muscle, and adipose tissue. It plays a crucial role in regenerating active glucocorticoid from circulating glucocorticoids and regulates the production of cortisol to activate the glucocorticoid receptors. AZD4017 does not inhibit the anti-inflammatory activity of the administered glucocorticoids.