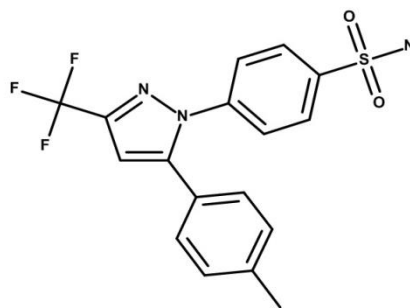


Application Note: Celecoxib

Celecoxib, sold under the brand name Celebrex among others, is a COX-2 inhibitor and nonsteroidal anti-inflammatory drug (NSAID). It is used to treat the pain and inflammation in osteoarthritis, acute pain, rheumatoid arthritis, and painful menstruation.

A highly selective reversible inhibitor of the COX-2 isoform of cyclooxygenase, celecoxib inhibits the transformation of arachidonic acid to prostaglandin precursors. Therefore, it has analgesic and anti-inflammatory properties.

Celecoxib is approximately 10-20 times more selective for COX-2 inhibition over COX-1. It binds with its polar sulfonamide side chain to a hydrophilic side pocket region close to the active COX-2 binding site. In theory, this selectivity allows celecoxib and other COX-2 inhibitors to reduce inflammation (and pain) while minimizing gastrointestinal adverse drug reactions (e.g. stomach ulcers) that are common with non-selective NSAIDs.



Column: Horizon C18 5 μ 150x4.6mm

Mobile Phase: MeOH/MeCN/Water (3:3:4)

Flow rate: 1ml/min

Wavelength: 215nm

Temperature: 40°C

1. Celecoxib

