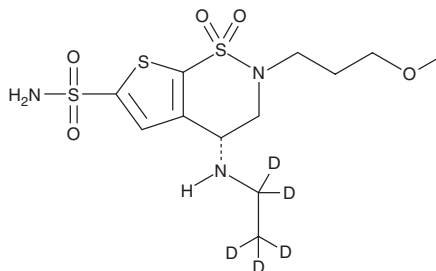


# PRODUCT INFORMATION



## Brinzolamide-d<sub>5</sub> Item No. 30006

**CAS Registry No.:** 1217651-02-9  
**Formal Name:** (4R)-4-(ethyl-1,1,2,2,2-d<sub>5</sub>-amino)-3,4-dihydro-2-(3-methoxypropyl)-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide, 1,1-dioxide  
**MF:** C<sub>12</sub>H<sub>16</sub>D<sub>5</sub>N<sub>3</sub>O<sub>5</sub>S<sub>3</sub>  
**FW:** 388.5  
**Chemical Purity:** ≥95% (Brinzolamide)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Brinzolamide-d<sub>5</sub> is intended for use as an internal standard for the quantification of brinzolamide (Item No. 11660) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Brinzolamide-d<sub>5</sub> is supplied as a solid. A stock solution may be made by dissolving the brinzolamide-d<sub>5</sub> in the solvent of choice, which should be purged with an inert gas. Brinzolamide-d<sub>5</sub> is soluble in DMSO.

### Description

Brinzolamide is a potent inhibitor of carbonic anhydrase II (CAII) and CAIV (IC<sub>50</sub>s = 3.19 and 45.3 nM, respectively).<sup>1</sup> It is selective for CAII and CAIV over CAI (IC<sub>50</sub> = ~1,365 nM). Brinzolamide (30 mg/kg) reduces intestinal charcoal meal progression by 44% and prolongs pentobarbital sodium-induced sleep time by 35% in mice. Topical administration of brinzolamide (0.25, 0.5, and 1 mg/eye) reduces intraocular pressure in a rabbit model of spontaneous ocular hypertension. It also reduces intraocular pressure in a cynomolgus monkey model of argon laser trabeculoplasty-induced ocular hypertension. Formulations containing brinzolamide have been used in the treatment of glaucoma and ocular hypertension.

### Reference

1. DeSantis, L. Preclinical overview of brinzolamide. *Surv. Ophthalmol.* **44**(Suppl. 2), S119-S129 (2000).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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