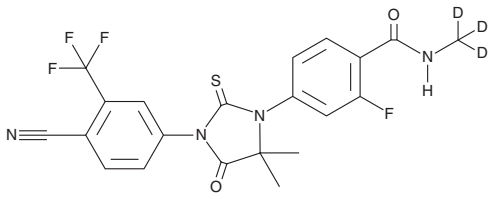
PRODUCT INFORMATION

Enzalutamide-d_3

Item No. 45044

CAS Registry No.:	1443331-82-5
Formal Name:	4-[3-[4-cyano-3-(trifluoromethyl) phenyl]-5,5-dimethyl-4-oxo-2-thioxo-1-imidazolidinyl]-2-fluoro-N-(methyl-d_3)-benzamide
MF:	$C_{21}H_{13}D_3F_4N_4O_2S$
FW:	467.5
Chemical Purity:	≥95% (Enzalutamide)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
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

Enzalutamide-d_3 is intended for use as an internal standard for the quantification of enzalutamide (Item No. 11596) 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).

Enzalutamide-d_3 is supplied as a solid. A stock solution may be made by dissolving the enzalutamide-d_3 in the solvent of choice, which should be purged with an inert gas. Enzalutamide-d_3 is slightly soluble in chloroform and ethyl acetate.

Description

Enzalutamide is a non-steroidal androgen receptor antagonist (IC_{50} = 36 nM).[1,2] It reduces the efficiency of nuclear translocation of the androgen receptor and impairs both its binding to DNA and the recruitment of coactivators.[1] It is orally available and induces tumor regression in mouse models of castration-resistant human prostate cancer.[1] Formulations containing enzalutamide have been used in the treatment of prostate cancer.

References

1. Tran, C., Ouk, S., Clegg, N.J., *et al*. Development of a second-generation antiandrogen for treatment of advanced prostate cancer. *Science* **324(5928)**, 787-790 (2009).
2. Jung, M.E., Ouk, S., Yoo, D., *et al*. Structure-activity relationship for thiohydantoin androgen receptor antagonists for castration-resistant prostate cancer (CRPC). *J. Med. Chem.* **53(7)**, 2779-2796 (2010).

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