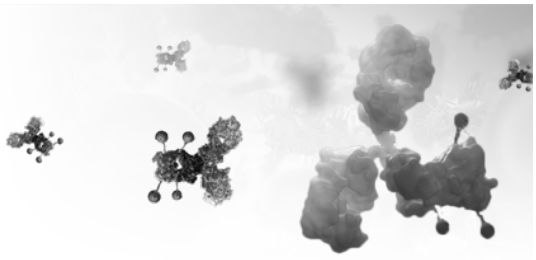

Norketamine [HRP] (DAGB343)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Each conjugate comprises antigen covalently bound to horseradish peroxide and is suitable as a tracer in immunoassay development.
Species	N/A
Conjugate	HRP
Applications	IA
Format	The conjugate is supplied as a concentrate. Dilute as required and use working strength conjugate immediately after dilution
Preservative	None
Storage	2 - 8°C for up to 3 months / -20°C for long term storage

BACKGROUND

Introduction

Norketamine, or N-desmethylketamine, is the major active metabolite of ketamine, which is formed mainly by CYP3A4. Similarly to ketamine, norketamine acts as a noncompetitive NMDA receptor antagonist (Ki = 1.7 μM and 13 μM for (S)-(+)-norketamine and (R)-(–)-norketamine, respectively), but is about 3–5 times less potent as an anesthetic in comparison. Also, similarly again to ketamine, norketamine binds to the μ- and κ-opioid receptors. Relative to ketamine, norketamine is much more potent as an antagonist of the α7-nicotinic acetylcholine receptor, and produces rapid antidepressant effects in animal models which have been reported to correlate with its activity at this receptor. However, norketamine is about 1/5th as potent as ketamine as an antidepressant in mice as per the forced swim test, and this seems also to be in accordance with its 3–5-fold reduced comparative potency in vivo as an NMDA receptor antagonist. Norketamine is metabolized into dehydronorketamine and hydroxynorketamine, which are far less or negligibly active as NMDA receptor antagonists in comparison but retain activity as potent antagonists of the α7-nicotinic acetylcholine receptor.

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