

https://www.drugbank.ca/drugs/DB11580

DIQMTQSPSSLSASVGDRVTITCGASENIYGALNWYQQKPGKAPKLLIYGATNLADGVPS RFSGSGSGTDFTLTISSLQPEDFATYYCQNVLNTPLTFGQGTKVEIKRTVAAPSVFIFPP SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLT

LSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

>Heavy Chain

QVQLVQSGAEVKKPGASVKVSCKASGHIFSNYWIQWVRQAPGQGLEWMGEILPGSGHTEY

<u>TENEKDRVTMTRDTSTSTVYMELSSLRSEDTAVYYCARYEEGSSPNWYEDVWGOGTLVTV</u>

Drugs

VFLFPPKPKDTLMISRTPEVTCVVVDVSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNST YRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTISKAKGQPREPQVYTLPPSQEEMT KNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRWQE GNVFSCSVLHEALHSHYTQKSLSLSLGK

References:

1. METHOD FOR SIMULTANEOUS QUANTIFICATION OF ALXN1210 AND ECULIZUMAB IN HUMAN SERUM OR URINE: International Publication Number WO 2018/183449 A1 [File]

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Synonyms

Ravulizumab

ravulizumab-cwvz

External IDs (i)

ALXN-1210 / ALXN1210

Prescription **Products**

Show 10 entries

NAME ↑↓	DOSAGE ↑↓	STRENGTH ↑↓	ROUTE ↑↓	LABELLER ↑↓	MARKETING START ↑↓	MARKETING END ↑↓	↑↓	$\uparrow \downarrow$
Ultomiris	Solution, concentrate	300 mg/30mL	Intravenous	Alexion Pharmaceuticals Inc.	2018-12-21	Not applicable		

Showing 1 to 1 of 1 entries

Categories

Antibodies, Monoclonal

Complement Inactivating Agents

<u>Immunoglobulins</u>

Search

1 <u>></u>

Antibodies, Monoclonal,

Humanized

Complement Inactivator Proteins

Serum Globulins

UNII

C3VX249T6L

CAS number

1803171-55-2

PHARMACOLOGY

Indication

Ravulizumab is indicated for the treatment of adult patients with paroxysmal nocturnal hemoglobinuria (PNH) [Label].

Associated Conditions

Paroxysmal Nocturnal Hemoglobinuria PNH

Pharmacodynamics Immediate and complete inhibition of serum-free complement protein C5 (concentration of less than 0.5 mcg/mL) was observed by the end of the first ravulizumab infusion and sustained throughout the entire 26-week treatment period in all patients, both complement-inhibitor naïve and previously treated with eculizumab [Label].

> The extent and duration of the pharmacodynamic response in patients with PNH were exposure dependent for ravulizumab [Label]. Free C5 levels of <0.5 mcg/mL were correlated with maximal intravascular hemolysis control and complete terminal complement inhibition [Label].

Complete terminal complement inhibition following initiation of ravulizumab treatment led to normalization of serum LDH by week 4 in complement-inhibitor naïve patients and maintained LDH normalization in patients previously treated with eculizumab [Label].

Mechanism of

action

threatening ultra-rare blood disorder characterized by hemolysis (destruction of red blood cells) that is mediated by the uncontrolled activation of the complement system, a component of the



particular complement protein C5 with high affinity, thereby inhibiting its cleavage to C5a (the proinflammatory anaphylatoxin) and C5b (the initiating subunit of the terminal complement complex [C5b-9]) and preventing the generation of the terminal complement complex C5b9 [Label]. Ravulizumab inhibits terminal complement-mediated intravascular hemolysis in patients with PNH [Label]



TARGET	ACTIONS	ORGANISM
(U) Complement C5	inhibitor	Humans

Absorption

It has been demonstrated that mean ravulizumab Cmax and AUC∞ increase in a dose-proportional manner and that a single 400 mg intravenous dose of ravulizumab administered to subjects reach or exceed the threshold level of 100 µg/mL [2].

Volume of distribution

The mean (SD) volume of distribution at steady state was 5.34 (0.92) L [Label].

Protein binding

Readily accessible data regarding the protein binding of ravulizumab is not available.

Metabolism

Monoclonal antibody agents like ravulizumab are not expected to generate toxic metabolites as they generally undergo proteolysis to their constituent amino acids [F94].

Route of elimination

Monoclonal antibody agents like ravulizumab are generally not eliminated via hepatic, renal, or biliary routes [F94].

Half life

The mean (SD) terminal elimination half-life of ravulizumab in patients with PNH was recorded as 49.7 (8.9) days [Label].

Clearance

The mean (SD) clearance of ravulizumab in patients with PNH was recorded as being 0.08 (0.022) L/day respectively [Label].

Toxicity

Although PNH in pregnancy is associated with adverse maternal outcomes, including worsening cytopenias, thrombotic events, infections, bleeding, miscarriages, increased maternal mortality, and adverse fetal outcomes like fetal death and premature delivery, there are no available data on ravulizumab use in pregnant women to inform a drug-associated risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes [Label].

Although there are currently no human reproductive studies, human immunoglobulins like ravulizumab are known to cross the human placental barrier, and thus may potentially cause terminal complement inhibition in the fetal circulation [Label].

There are no data on the presence of ravulizumab in human milk, the effect on the breastfed child, or the effect on milk production [Label]. Since many medicinal products and immunoglobulins are secreted into human milk, and because of the potential for serious adverse reactions in a nursing child, breastfeeding should be discontinued during treatment and for 8 months after the final dose [Label].

The safety and efficacy of ravulizumab in pediatric patients and geriatric use have not yet been established [Label].

Genotoxicity studies have not been conducted with ravulizumab [Label].

Effects of ravulizumab upon fertility have not been studied in animals [Label]. Intravenous injections of male and female mice with a murine anti-C5 antibody at up to 0.8-2.2 times the equivalent of the clinical dose of ravulizumab had no adverse effects on mating or fertility [Label].

Affected organisms

Humans and other mammals

Pathways

Not Available

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INTERACTIONS

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Drug Interactions

<u>(i)</u>

ALL DRUGS APPROVED VET APPROVED NUTRACEUTICAL ILLICIT WITHDRAWN

INVESTIGATIONAL EXPERIMENTAL

Show 10	entries	Search	
DRUG ↑↓	INTERACTION		↑ ↓
<u>Abciximab</u>	The risk or severity of adverse effects can be increased when Abciximab is a Ravulizumab.	combined with	
<u>Abituzumab</u>	The risk or severity of adverse effects can be increased when Ravulizumab i Abituzumab.	s combined with	
<u>Adalimumab</u>	The risk or severity of adverse effects can be increased when Adalimumab i Ravulizumab.	s combined with	
<u>Adecatumumab</u>	The risk or severity of adverse effects can be increased when Adecatumuma Ravulizumab.	ab is combined with	
<u>Aducanumab</u>	The risk or severity of adverse effects can be increased when Ravulizumab i Aducanumab.	s combined with	
<u>Afelimomab</u>	The risk or severity of adverse effects can be increased when Afelimomab is Ravulizumab.	s combined with	
<u>Alemtuzumab</u>	The risk or severity of adverse effects can be increased when Alemtuzumab Ravulizumab.	is combined with	
<u>Alirocumab</u>	The risk or severity of adverse effects can be increased when Alirocumab is Ravulizumab.	combined with	
<u>Amatuximab</u>	The risk or severity of adverse effects can be increased when Ravulizumab i Amatuximab.	s combined with	
AMG 108	The risk or severity of adverse effects can be increased when AMG 108 is concerning the Ravulizumab.	mbined with	

Showing 1 to 10 of 244 entries

Food Interactions

Not Available

REFERENCES

Synthesis Reference Method for simultaneous quantification of alxn1210 and eculizumab in human serum or urine: WO20 8183449A1, Ryan Pelto, Meng Chen

General References

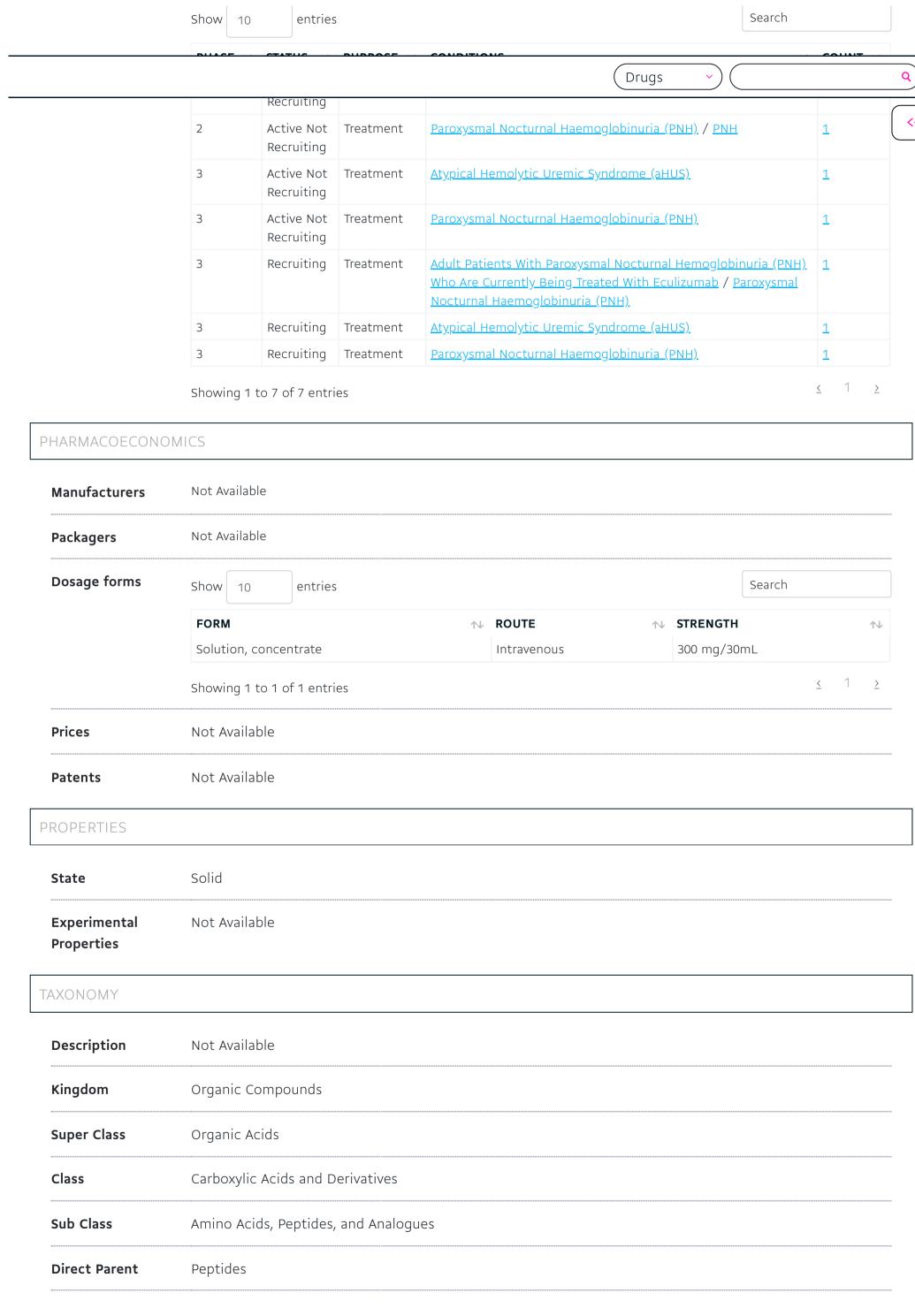
- 1. Alexion Receives Early FDA Approval for ULTOMIRIS™ (Ravulizumab-cwvz) in Adults with Paroxysmal Nocturnal Hemoglobinuria (PNH) [Link]
- 2. First in Human Single-Ascending Dose Study: Safety, Biomarker, Pharmacokinetics and Exposure-Response Relationships of ALXN1210, a Humanized Monoclonal Antibody to C5, with Marked Half-Life Extension and Potential for Significantly Longer Dosing Intervals / Blood 2015 125:4777 [Link]
- 3. Ravulizumab FDA Approval Press Release [File]

External Links Wikipedia Ravulizumab

FDA label <u>Download</u> (1.29 MB)

CLINICAL TRIALS

Clinical Trials (1)



Alternative Parents Not Available

https://www.drugbank.ca/drugs/DB11580

Substituents Not Available

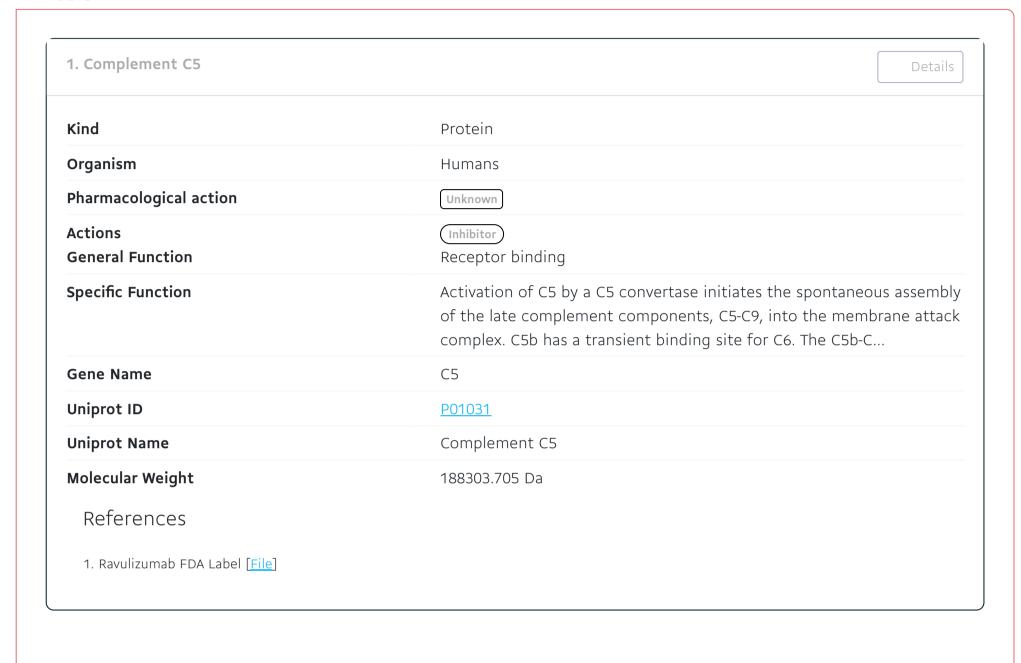
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Framework

External Descriptors

Not Available

TARGETS



Drug created on April 17, 2016 16:44 / Updated on January 03, 2019 18:41

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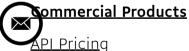
Wishart Research Group

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<u>Email Support</u>







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