For The Better Compliance

RUAJ

Meropenem for Injection 2 gm / 1 gm

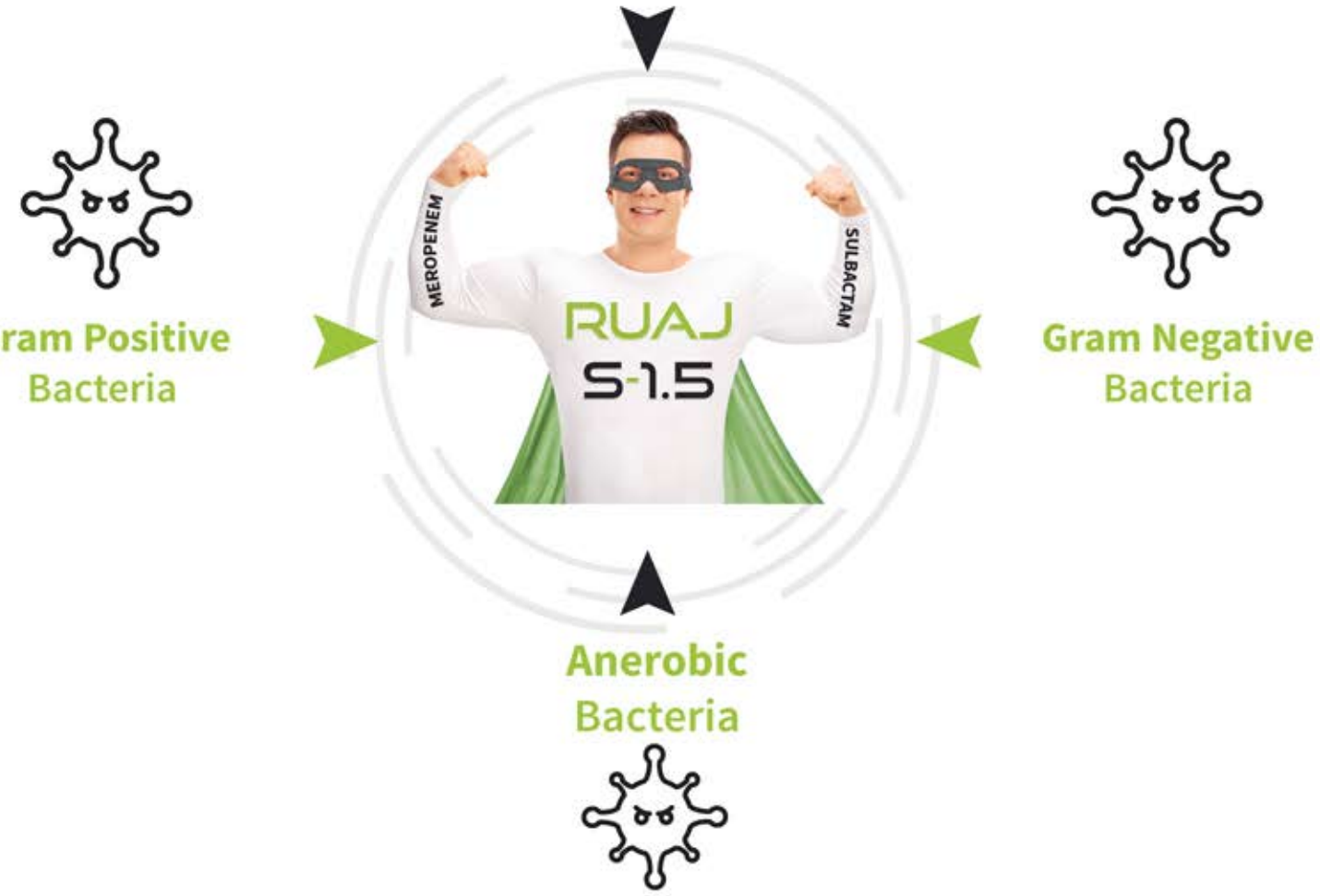
ALSO AVAILABLE

RUAJ-S-1.5

Meropenem & Sulbactam for Injection 1.5 gm

La Renon®

Research shows the appearance of ***Meropenem resistant bacterial strains***, the gene encoding IMP-6 MBL, a mutant β-lactamase active against the Meropenem so, fruitful way to increase the spectrum of activity of Meropenem by combining with Sulbactam



Meropenem more Potent Than Imipenem:

- Meropenem is 2 to 4 fold more potent than imipenem against Enterobacteriaceae, including strains producing ESBLs or AmpC

- Does not require concomitant administration of Cilastatin to inhibit human dehydropeptidase

Overall rank order of susceptibility of Meropenem against Gram Negetive isolates:

Meropenem (98%) > Imipenem (97%) > Cefepime (95%) > Tobramycin (93%) > Piperacillin/Tazobactam = Gentamicin (92%) > Ceftazidime (91%) > Ciprofloxacin (87%) > Aztreonam (86%) > Ceftriaxone (74%)

Clinical Evidence:

Synergistically Active and Safe Fixed Dose Combination of Meropenem and Sulbactam.

Introduction:

- Prolonged and overuse of antibiotics have led to development of resistance against the several antibiotic in microorganism as a survival strategy.
- Meropenem is one of the broad spectrum antibiotics among the Carbapenem class.
- Sulbactam has higher stability in the solution compared to its counterpart clavulanate

Method:

- Meropenem and sulbactam fixed dose combinations were prepared in the ratio of 1:1, 1:2, 1:3, 2:1 and 3:1 by mixing stock solutions of Meropenem and Sulbactam so that final concentration of Meropenem in combination remained 100 μg/mL
- Minimum inhibitory concentration (MIC), Minimum Bactericidal Concentration (MBC), Fractional inhibitory concentration index (FICi), Zone of inhibition and time Kill study were performed on bacterial strains Pseudomonas aeruginosa and Escherichia coli

Interpretation:

- The interaction was defined as synergistic if the FICi was ≤0.5, as partial synergy / additive if the FICi was >0.5 to 1.0, as indifferent if the FICi was >1.0 to 2.0, and as antagonistic if the FICi was >2.0.

Results:

- Meropenem-Sulbactam combination in the proportion of 2:1 showed bacterial growth inhibition for E. coli and Pseudomonas aeruginosa up to 35 hours effectively as compared to Meropenem alone
- This combination has FICi value close to 0.5 and was found to behave synergistically

Conclusion:

Meropenem and Sulbactam combination act as a potent antimicrobial combination at ratio of 2:1 respectively

Reference:

1) Goyal V K; International Journal of Medical Science Research and Practice 2014; 1(1): 03-05
2) Beniwal and Arora (2012) IIOAB Letters, 2: 1-6

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Also Available

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Meropenem & Sulbactam for Injection 1.5 gm

Description

It is a sterile, pyrogen free, synthetic, broad spectrum Carbapenem antibiotic for intravenous administration.

Composition:

RUAJ-S 1.5

Each vial contains:
Meropenem I.P. (Sterile).....1000 mg
Sodium Carbonate I.P. (As Buffer).....90.2 mg
Sulbactam Sodium U.S.P. (Sterile).....500 mg

RUAJ 1

Each vial contains:
Meropenem I.P. (Sterile).....1000 mg
Sodium Carbonate I.P. (As Buffer).....90.2 mg

RUAJ 2

Each vial contains:
Meropenem I.P. (Sterile).....2000 mg
Sodium Carbonate I.P. (As Buffer).....180.4 mg

Mechanism of Action:

Meropenem has bactericidal action by interfering with bacterial cell wall synthesis of both gram positive and gram negative bacteria & Sulbactam is β-lactamase inhibitor thus prolong the action of Meropenem.

Indications:

- Lower Respiratory Tract Infections.
- Urinary Tract Infections, including complicated infections.
- Intra abdominal Infections.
- Gynaecological Infections, including postpartum infections.
- Skin and Skin Structure Infections.
- Meningitis.
- Septicaemia.
- Empiric treatment, including initial monotherapy, for presumed bacterial infections in host compromised, neutropenic patients.

Dosage:

Patient	Indication	Dosage	Duration
Adult	Intra-Abdominal Infection	1g 8 hourly	7-14 days
	Nosocomial Pneumonia	1g 8 hourly	4-7 days
	Skin or Soft tissue infection	500mg-1gm 8 hourly	7-10 days
	Cystic Fibriosis	2g 8 hourly	7-10 days
	Meningitis	2g 8 hourly	7-21 days
	MIC value>4 mg/ml	2g 8 hourly	7-21 days
Renal Adult	CrCl 26-50 ml/min	1g 12 hourly	----------
	CrCl 10-25 ml/min	500 mg 12 hourly	----------
	CrCl <9 ml/min	500 mg 24 hourly	----------
Pediatric	Intra-Abdominal Infection	20mg/kg 8 hourly	----------
	Meningitis	40mg/kg 8 hourly	----------
	Skin and skin structure infection	10mg/kg 8 hourly	----------

Presentation:

RUAJ-S 1.5, ***RUAJ 1*** & ***RUAJ 2*** is available as glass vial packed in monocarton.

Reference

1) Eagye KJ et al. Critical Care Medicine 2012;40:1329
2) Keel RA et al. American Journal of Health System Pharmacist 2011;68:1619
3) Catharine CB et al. Respiratory Medicine CME 3 (2010): 146–149

La Renon Healthcare Pvt. Ltd.

207-208 Iscon Elegance, Circle P, Prahlad Nagar Cross Roads,
S.G.Highway, Ahmedabad-380015, Gujarat, India.
Phone: +91-79-3046-1000 (30 Lines) , Fax: +91-79-3046-1001
E-mail: info@larenon.com, Web: www.larenon.com