

298859_1.txt
SEQUENCE LISTING

<110> Regeneron Pharmaceuticals, Inc.

<120> Assays For Screening Activity Of Modulators Of Members Of The Hydroxysteroid (17-beta) Dehydrogenase (HSD17B) Family

<130> 189238.00102 (3024)

<150> 62/484,141

<151> 2017-04-11

<160> 9

<170> PatentIn version 3.5

<210> 1

<211> 300

<212> PRT

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Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile Tyr
1 5 10 15

Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
130 135 140

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Ile Leu Gly His Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met
145 150 155 160

Glu Arg Asn His Gly His Ile Val Thr Val Ala Ser Val Cys Gly His
165 170 175

Glu Gly Ile Pro Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala
180 185 190

Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys
195 200 205

Thr Gly Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly
210 215 220

Phe Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp
225 230 235 240

Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met
245 250 255

Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Lys Phe
260 265 270

Leu Pro Glu Arg Ala Ser Ala Ile Leu Asn Arg Met Gln Asn Ile Gln
275 280 285

Phe Glu Ala Val Val Gly His Lys Ile Lys Met Lys
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<400> 2

Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile Tyr
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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val

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55

60

Leu Trp Asp Ile Asn Lys Val Lys Lys Glu Val Gly Asp Val Thr Ile
65 70 75 80

Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp Leu Leu Ser Thr
85 90 95

Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn Ile Leu Gly His
100 105 110

Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met Glu Arg Asn His
115 120 125

Gly His Ile Val Thr Val Ala Ser Val Cys Gly His Glu Gly Ile Pro
130 135 140

Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe His
145 150 155 160

Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys Thr Gly Ile Lys
165 170 175

Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly Phe Thr Lys Asn
180 185 190

Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp Glu Val Val Arg
195 200 205

Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met Ile Phe Val Pro
210 215 220

Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Lys Phe Leu Pro Glu Arg
225 230 235 240

Ala Ser Ala Ile Leu Asn Arg Met Gln Asn Ile Gln Phe Glu Ala Val
245 250 255

Val Gly His Lys Ile Lys Met Lys
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Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile Tyr
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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
130 135 140

Ile Leu Gly His Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met
145 150 155 160

Glu Arg Asn His Gly His Ile Val Thr Val Ala Ser Val Cys Gly His
165 170 175

Glu Gly Ile Pro Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala
180 185 190

Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys
195 200 205

Thr Gly Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly
210 215 220

Phe Thr Lys Asn Pro Ser Thr Arg Phe Leu Pro Glu Arg Ala Ser Ala
225 230 235 240

Ile Leu Asn Arg Met Gln Asn Ile Gln Phe Glu Ala Val Val Gly His
245 250 255

Lys Ile Lys Met Lys
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Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile Tyr
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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
 20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
 35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
 50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
 65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
 85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
 100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
 115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
 130 135 140

Ile Leu Gly His Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met
 145 150 155 160

Glu Arg Asn His Gly His Ile Val Thr Val Ala Ser Val Cys Gly His
 165 170 175

Glu Gly Ile Pro Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala
 180 185 190

Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys
 195 200 205

Thr Gly Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly
 210 215 220

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Phe Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp
225 230 235 240

Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met
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Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Lys Val
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Ser Ser

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Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Ile Thr Ile Ile Tyr
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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
130 135 140

Ile Leu Gly His Phe Trp Asn Gly Lys Asp Ile Arg Ser Asn Tyr Leu
145 150 155 160

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Asp Val Tyr Arg Ile Glu Asp Thr Phe Gly Arg Asp Ser Glu Ile Thr
165 170 175

Lys Ala Leu Leu Pro Ser Met Met Glu Arg Asn His Gly His Ile Val
180 185 190

Thr Val Ala Ser Val Cys Gly His Glu Gly Ile Pro Tyr Leu Ile Pro
195 200 205

Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe His Arg Gly Leu Thr
210 215 220

Ser Glu Leu Gln Ala Leu Gly Lys Thr Gly Ile Lys Thr Ser Cys Leu
225 230 235 240

Cys Pro Val Phe Val Asn Thr Gly Phe Thr Lys Asn Pro Ser Thr Arg
245 250 255

Leu Trp Pro Val Leu Glu Thr Asp Glu Val Val Arg Ser Leu Ile Asp
260 265 270

Gly Ile Leu Thr Asn Lys Lys Met Ile Phe Val Pro Ser Tyr Ile Asn
275 280 285

Ile Phe Leu Arg Leu Gln Lys Phe Leu Pro Glu Arg Ala Ser Ala Ile
290 295 300

Leu Asn Arg Met Gln Asn Ile Gln Phe Glu Ala Val Val Gly His Lys
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Ile Lys Met Lys

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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
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Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

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Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
130 135 140

Ile Leu Gly His Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met
145 150 155 160

Glu Arg Asn His Gly His Ile Val Thr Val Ala Ser Val Cys Gly His
165 170 175

Glu Gly Ile Pro Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala
180 185 190

Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys
195 200 205

Thr Gly Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly
210 215 220

Phe Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp
225 230 235 240

Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met
245 250 255

Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Lys Leu
260 265 270

Ser Thr Ala Gln Asn Thr Gln Ile Leu Lys His Gln
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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
130 135 140

Ile Leu Gly His Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met
145 150 155 160

Glu Arg Asn His Gly His Ile Val Thr Val Ala Ser Val Cys Gly His
165 170 175

Glu Gly Ile Pro Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala
180 185 190

Val Gly Phe His Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys
195 200 205

Thr Gly Ile Lys Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly
210 215 220

Phe Thr Lys Asn Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp
225 230 235 240

Glu Val Val Arg Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met
245 250 255

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Ile Phe Val Pro Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Lys
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<400> 8

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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
20 25 30

Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Val Lys Lys Glu Val Gly Asp Val Thr Ile
65 70 75 80

Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp Leu Leu Ser Thr
85 90 95

Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn Ile Leu Gly His
100 105 110

Phe Trp Ile Thr Lys Ala Leu Leu Pro Ser Met Met Glu Arg Asn His
115 120 125

Gly His Ile Val Thr Val Ala Ser Val Cys Gly His Glu Gly Ile Pro
130 135 140

Tyr Leu Ile Pro Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe His
145 150 155 160

Arg Gly Leu Thr Ser Glu Leu Gln Ala Leu Gly Lys Thr Gly Ile Lys
165 170 175

Thr Ser Cys Leu Cys Pro Val Phe Val Asn Thr Gly Phe Thr Lys Asn
180 185 190

Pro Ser Thr Arg Leu Trp Pro Val Leu Glu Thr Asp Glu Val Val Arg

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195

200

205

Ser Leu Ile Asp Gly Ile Leu Thr Asn Lys Lys Met Ile Phe Val Pro
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Ser Tyr Ile Asn Ile Phe Leu Arg Leu Gln Lys Val Ser Ser
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Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg Arg Lys
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Ser Val Ala Gly Glu Ile Val Leu Ile Thr Gly Ala Gly His Gly Ile
35 40 45

Gly Arg Gln Thr Thr Tyr Glu Phe Ala Lys Arg Gln Ser Ile Leu Val
50 55 60

Leu Trp Asp Ile Asn Lys Arg Gly Val Glu Glu Thr Ala Ala Glu Cys
65 70 75 80

Arg Lys Leu Gly Val Thr Ala His Ala Tyr Val Val Asp Cys Ser Asn
85 90 95

Arg Glu Glu Ile Tyr Arg Ser Leu Asn Gln Val Lys Lys Glu Val Gly
100 105 110

Asp Val Thr Ile Val Val Asn Asn Ala Gly Thr Val Tyr Pro Ala Asp
115 120 125

Leu Leu Ser Thr Lys Asp Glu Glu Ile Thr Lys Thr Phe Glu Val Asn
130 135 140

Ile Leu Gly His Phe Trp Asn Gly Lys Asp Ile Arg Ser Asn Tyr Leu
145 150 155 160

Asp Val Tyr Arg Ile Glu Asp Thr Phe Gly Arg Asp Ser Glu Ile Thr
165 170 175

298859_1.txt

Lys	Ala	Leu	Leu	Pro	Ser	Met	Met	Glu	Arg	Asn	His	Gly	His	Ile	Val
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Thr	Val	Ala	Ser	Val	Cys	Gly	His	Glu	Gly	Ile	Pro	Tyr	Leu	Ile	Pro
		195					200					205			
Tyr	Cys	Ser	Ser	Lys	Phe	Ala	Ala	Val	Gly	Phe	His	Arg	Gly	Leu	Thr
	210					215					220				
Ser	Glu	Leu	Gln	Ala	Leu	Gly	Lys	Thr	Gly	Ile	Lys	Thr	Ser	Cys	Leu
225					230					235					240
Cys	Pro	Val	Phe	Val	Asn	Thr	Gly	Phe	Thr	Lys	Asn	Pro	Ser	Thr	Arg
				245					250					255	
Leu	Trp	Pro	Val	Leu	Glu	Thr	Asp	Glu	Val	Val	Arg	Ser	Leu	Ile	Asp
			260					265					270		
Gly	Ile	Leu	Thr	Asn	Lys	Lys	Met	Ile	Phe	Val	Pro	Ser	Tyr	Ile	Asn
		275					280					285			
Ile	Phe	Leu	Arg	Leu	Gln	Lys	Val	Ser	Ser						
	290					295									