

Table 2. WGS IGV links for USMARC Beef Cattle Diversity Panel v2.9 by mixed group^a.

Breed	USMARC animal ID	Public links	Estimated ^b mapped read coverage	GB >Q20 ^c	.bam file
Group #1, 8 genomes		View group #1 in IGV	12.9	419.6	NA ^d
Angus	19879801		12.7	51.4	7686214420
Hereford	19969811		11.7	47.5	7686214409
Charolais	19939808		9.9	40.2	7686215631
Simmental	19929810		16.3	66.4	7686214439
Red Angus	19979802		9.9	40.3	7686215630
Limousin	19989863		10.7	43.4	7686214416
Gelbvieh	19929826		12.5	50.8	7686214443
Brahman	19919842		19.6	79.7	7686214421
Group #2, 8 genomes		View group #2 in IGV	12.3	400.4	NA
Angus	19939802		10.3	41.7	7686214358
Hereford	19969812		14.3	58.2	7686214382
Charolais	19969825		10.0	40.8	7686214369
Simmental	19999842		11.8	48.1	7686214379
Red Angus	19999855		10.2	41.5	7686214434
Limousin	19999833		11.9	48.2	7686214438
Gelbvieh	19989876		10.5	42.5	7686214447
Brahman	19999811		19.6	79.4	7686214445
Group #3, 8 genomes		View group #3 in IGV	12.5	406.3	
Angus	19999821		10.7	43.4	7686214435
Hereford	19989837		14.3	58.1	7686214427
Charolais	19989916		12.3	49.9	7686215629
Simmental	19999843		12.6	51.1	7686214372
Red Angus	19999856		10.3	41.9	7686214432
Limousin	19999834		10.6	43.2	7686214442
Gelbvieh	19999863		19.2	78.1	7686214399
Brahman	19999812		10.0	40.6	7686214367
Group #4, 8 genomes		View group #4 in IGV	12.6	409.0	
Angus	19999822		11.0	44.8	7686214444
Hereford	19999828		10.1	41.2	7686214385
Charolais	19989919		16.8	68.3	7686214374
Simmental	19999846		13.4	54.3	7686214401
Red Angus	19999857		15.1	61.2	7686214383
Limousin	19999835		11.5	46.8	7686214375
Gelbvieh	19999864		10.2	41.2	7686214398
Brahman	19999813		12.6	51.2	7686214429
Group #5, 8 genomes		View group #5 in IGV	11.3	366.6	
Angus	19999823		11.4	46.3	7686214359

Hereford	19999829	10.8	44.0	7686214376
Charolais	19999851	10.1	40.8	7686214415
Simmental	19999847	12.2	49.5	7686214395
Red Angus	19999859	10.0	40.5	7686214384
Limousin	19999837	11.2	45.7	7686214393
Gelbvieh	19999865	12.5	50.7	7686215632
Brahman	19999819	12.1	49.2	7686214392
Group #6, 8 genomes	View group #6 in IGV	10.7	346.9	
Angus	19999825	11.0	44.6	7686214446
Hereford	20049808	10.2	41.3	7686214412
Charolais	19999852	11.7	47.6	7686214433
Simmental	19999848	9.9	40.2	7686214406
Red Angus	19999860	10.1	40.9	7686214402
Limousin	19999838	10.4	42.4	7686214391
Gelbvieh	19999866	10.2	41.5	7686214449
Brangus	19999909	11.9	48.4	7686214440
Group #7, 8 genomes	View group #7 in IGV	12.8	416.6	
Brangus	19999910	11.8	48.1	7686214380
Beefmaster	19999925	19.4	78.8	7686214378
Salers	19999874	10.3	41.8	7686214400
Shorthorn	19999891	10.4	42.2	7686214423
Maine-Anjou	19999902	9.9	40.3	7686214418
Chianina	19999914	9.9	40.2	7686214386
Texas Longhorn	19999870	10.5	42.8	7686214403
Santa Gertrudis	19999905	20.3	82.5	7686214361
Group #8, 8 genomes	View group #8 in IGV	11.6	377.1	
Brangus	19999911	20.9	84.9	7686214389
Beefmaster	19999926	10.5	42.6	7686214370
Salers	19999875	10.3	41.7	7686214436
Shorthorn	19999892	10.1	41.0	7686214365
Maine-Anjou	19999904	10.4	42.4	7686214373
Chianina	19999918	10.0	40.4	7686214360
Texas Longhorn	19999871	10.2	41.4	7686214425
Santa Gertrudis	19999906	10.5	42.7	7686214419
Group #9, 8 genomes	View group #9 in IGV	12.5	404.742	
Brangus	19999912	10.6	42.9	7686214364
Beefmaster	19999927	27.0	109.4	7686214411
Salers	19999876	10.3	41.8	7686214405
Shorthorn	19999893	10.1	40.9	7686214428
Maine-Anjou	19999900	10.3	41.8	7686214426
Chianina	19999923	10.7	43.5	7686214422
Texas Longhorn	19999872	10.0	40.6	7686214431
Santa Gertrudis	19999907	10.8	43.7	7686214396

Group #10, 8 genomes		View group #10 in IGV	11.5	372.3
Brangus	19999913		10.5	42.7
Beefmaster	19999928		13.2	53.7
Salers	19999880		12.2	49.6
Shorthorn	19999894		10.1	41.2
Maine-Anjou	19999901		11.2	45.6
Chianina	19999924		13.2	53.4
Texas Longhorn	19999873		10.2	41.4
Santa Gertrudis	19999908		11.0	44.7
Group #11, 8 genomes		View group #11 in IGV	10.7	348.1
Beefmaster	19999929		11.0	44.8
Salers	19999882		10.6	43.1
Shorthorn	19999895		11.1	45.2
Maine-Anjou	19999903		10.0	40.7
Braunvieh	19220065		10.6	43.2
Braunvieh	19220072		10.9	44.1
Corriente	19202900		11.3	46.1
Tarentaise	19293032		10.1	40.9
Group #12, 8 genomes		View group #12 in IGV	11.2	364.8
Braunvieh	19220079		11.3	46.0
Braunvieh	19220086		10.6	42.8
Corriente	19202901		10.1	41.1
Corriente	19202902		12.9	52.4
Corriente	19202903		10.5	42.7
Tarentaise	19293033		11.8	47.7
Tarentaise	19293034		11.9	48.1
Tarentaise	19293035		10.8	43.8
Total			1141.0	4632.6
Average			11.9	48.3

^aGroups 1 through 5 contain bulls from seven USMARC CycleVII breeds, plus a Brahman bull. Groups 6 through 10 contain bulls from eight remaining breeds, generally in order of most registered progeny. Groups 11 and 12 contain bulls from the remaining breeds.

^bAn average for the group.

^cTotal gigabases of genomic sequence with a quality score greater than or equal to 20. Tru-Seq paired-end libraries were sequenced with NextSeq500 high-output kits (300 cycles, Illumina Inc. San Diego CA).

^dNot applicable

Citation: Heaton MP, Smith TPL, Carnahan JK, Basnayake V, Qiu J, Simpson B, Kalbfleisch TS. **Using diverse U.S. beef cattle genomes to identify missense mutations in *EPAS1*, a gene associated with high-altitude pulmonary hypertension.** F1000Research 2016, 5:2003.

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