Supplementary Information

Semimetallic electrical properties of rock-salt type LaBi thin film grown by solid-phase reaction of La/Bi multilayer precursor

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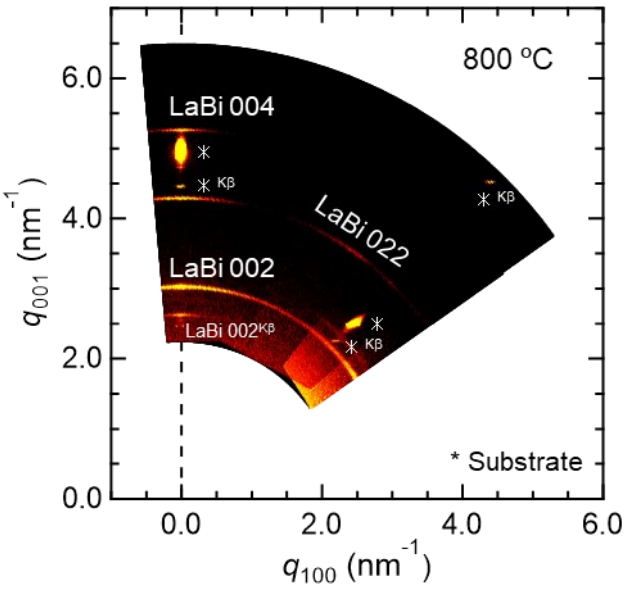

Fig. S1 Two-dimensional X-ray diffraction pattern for LaBi thin film with T_g = 800 ºC.

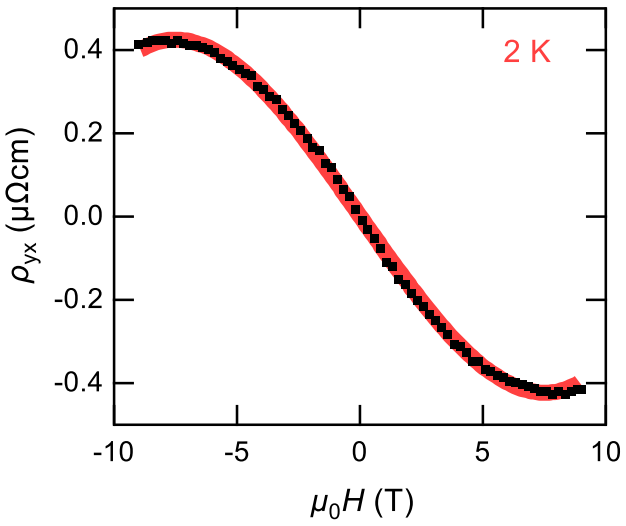

Fig. S2 Magnetic field dependence of Hall resistivity for LaBi thin film at 2 K. Red curve denotes the fitting result using two-carrier model.

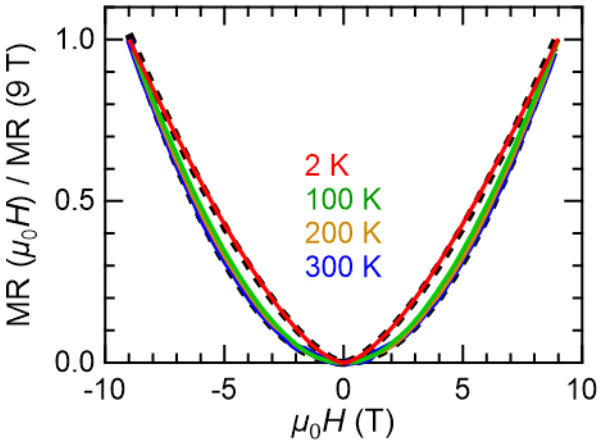

Fig. S3 Normalized magnetoresistance (MR) at 2, 100, 200, and 300 K. Dashed curves denote fitting results with $(\mu_0H)^{1.5}$ and $(\mu_0H)^2$ dependence for 2 K and 100–300 K, respectively.

Table. S1 Electron carrier density (n_e), hole carrier density (n_h), electron mobility (μ_e), and hole mobility (μ_h) for LaBi.

	n_e (/cm^3)	n_h (/cm^3)	μ_e (cm^2/Vs)	μ_h (cm^2/Vs)	Ref.
This study (2K)	1.11×10^{20}	1.25×10^{20}	5.77×10^{2}	5.26×10^{2}	-
Bulk (2 K)	6.12×10^{19}	6.09×10^{19}	5.68×10^{3}	5.88×10^{3}	1
Bulk (2 K)	$6.0(4) \times 10^{20}$	$6.0(3) \times 10^{20}$	$2.6(1) \times 10^{4}$	$3.1(1) \times 10^{4}$	2
Bulk (2 K)	7.62×10^{20}	7.56×10^{20}	1.75×10^{4}	1.89×10^{4}	3
Bulk (5 K)	2×10^{19}	1.9×10^{19}	1.28×10^{4}	1.26×10^{4}	4

References in Supplementary Information

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