

# eth\_getBlockByHash

Returns information about a block whose hash is in the request.

For Growth and Custom service plans This JSON-RPC method allows a request to be forwarded to a partner service provider if Infura should experience a service issue or outage. See [Failover protection](#) and [Enable API request forwarding](#) for complete details.

If you would like failover protection but don't qualify under your current plan, then either self-upgrade to the Growth plan or contact a sales representative to upgrade to a Custom plan.

## Parameters

- hash
  - : (string) [Required]
  - ] A string representing the hash (32 bytes) of a block.
- transaction details flag
  - : (boolean) [Required]
  - ] If set tottrue
  - , returns the full transaction objects, iffalse
  - returns only the hashes of the transactions.

## Returns

A block object matching the hash in the request, or null when no block was found. The matched block contains the following keys and their values:

- difficulty
  - : A hexadecimal of the difficulty for this block.
- extraData
  - : The "extra data" field of this block.
- gasLimit
  - : Maximum gas allowed in this block.
- gasUsed
  - : Total used gas by all transactions in this block.
- hash
  - : 32 bytes. The hash of the block. Null when the returned block is the pending block.
- logsBloom
  - : 256 bytes. The bloom filter for the logs of the block. Null when the returned block is the pending block.
- miner
  - : 20 bytes. The address of the beneficiary to whom the mining rewards were given.
- nonce
  - : 8 bytes. The hash of the generated proof-of-work. Null when the returned block is the pending block.
- number
  - : The block number. Null when the returned block is the pending block.
- parentHash
  - : 32 bytes. The hash of the parent block.
- receiptsRoot
  - : 32 bytes. The root of the receipts trie of the block.
- sha3Uncles
  - : 32 bytes. The SHA3 of the uncles data in the block.
- size
  - : A hexadecimal of the size of this block in bytes.
- stateRoot
  - : 32 bytes. The root of the final state trie of the block.
- timestamp
  - : Unix timestamp for when the block was collated.
- totalDifficulty
  - : A hexadecimal of the total difficulty of the chain until this block.
- transactions
  - : [Array] An array of transaction objects, or 32 bytes transaction hashes depending on the last given parameter.
- transactionsRoot
  - : 32 bytes. The root of the transaction trie of the block.
- uncles
  - : [Array] An Array of uncle hashes.

## Example

ReplaceYOUR-API-KEY with an API key from your[infura dashboard](#) .

### Request

- cURL
- WSS

curl https://polygon-mainnet.infura.io/v3/YOUR-API-KEY \-X POST \-H "Content-Type: application/json" \-d '{"jsonrpc":"2.0","method":"eth\_getBlockByHash","params":["0xb3b20624f8f0f86eb50dd04688409e5cea4bd02d700bf6e79e9384d47d6a5a35",false],"id":1}' wscat -c wss://polygon-mainnet.infura.io/ws/v3/YOUR-API-KEY -x '{"jsonrpc":"2.0","method":"eth\_getBlockByHash","params":["0xb3b20624f8f0f86eb50dd04688409e5cea4bd02d700bf6e79e9384d47d6a5a35",false],"id":1}'

### Response

- JSON

```
{ "jsonrpc": "2.0", "id": 1, "result": { "difficulty": "0xbfabcd93dda", "extraData": "0x737061726b706f6f6c6d636e2d6e6f64652d3132", "gasLimit": "0x79f39e", "gasUsed": "0x79ccd3", "hash": "0xb3b20624f8f0f86eb50dd04688409e5cea4bd02d700bf6e79e9384d47d6a5a35", "logsBloom": "0x4848112002a2020aaa0812180045840210020005281600c80104264300080008000491220144461026015300100000128005018401002090a824a4150015410020140400d808440106689b29d0280b", "miner": "0x5a0b54d5dc17e0aadc383d2db43b0a0d3e029c4c", "mixHash": "0x3d1fdd16f15aeab72e7db1013b9f034ee33641d92171c0736beab4e67d34c7a7", "nonce": "0x4db7a1c01d8a8072", "number": "0x5bad55", "parentHash": "0x61a8ad530a8a43e3583f8ec163f773ad370329b2375d66433eb821005e1d6202", "receiptsRoot": "0x5eced534b3d84d3d732ddbc714f5fd51d98a941b28182b6efe6df3a0fe90004b", "sha3Uncles": "0x8a562e7634774d3e3a36698ac4915e37fc84a2cd0044cb84fa5d80263d2af4f6", "size": "0x41c7", "stateRoot": "0xf5208fffa2ba5a3f3a2f64ebd5ca3d098978bedd75f335f56b705d8715ee2305", "timestamp": "0x5b541449", "totalDifficulty": "0x12ac11391a2f3872fcd", "transactions": [ "0x8784d99762bccd03b2086eabccce0d77f14d05463281e121a62abf6bcf0d2d5f", "0x311be6a9b58748717ac0f70eb801d29973661aaf1365960d159e4ec4f4aa2d7f", "0xe42b0256058b7cad8a14b136a0364acda0b4c36f5b02dea7e69bfd82cef252a2", "0x4eb05376055c6456ed883fc843bc43df1dcf739c321ba431d518aecdf98ca11", "0x994dd9e72b212b7dc5fd0466ab75ad7d391cf4f206a65b7ad2a1fd032bb06d7", "0xf6feecbb9ab0ac58591a4bc287059b1133089c499517e91a274e6a1f5e7dce53", "0x7e537d687a5525259480440c6ea2e1a8469cd98906eaff8597f3d2a44422ff97", "0xa762220e92bed6d77a2c19ffc60dad77d71bd5028c5230c896ab4b9552a39b50", "0xf1fa677edda7e5add8e794732c7554cd5459a5c12781dc71de73c7937dfb2775", "0x241d89f7888fbcfadfd415ee967882fec6fdd67c07ca8a00f2ca4c910a84c7dd" ], "transactionsRoot": "0xf98631e290e88f58a46b7032f025969039aa9b5696498efc76baf436fa69b262", "uncles": [ "0x824cce7c7c2ec6874b9fa9a9a898eb5f27cbaf3991dfa81084c3af60d1db618c" ] } }
```

Last updatedonApr 19, 2024 [Previous eth\\_getBalance](#) [Next eth\\_getBlockByNumber](#)